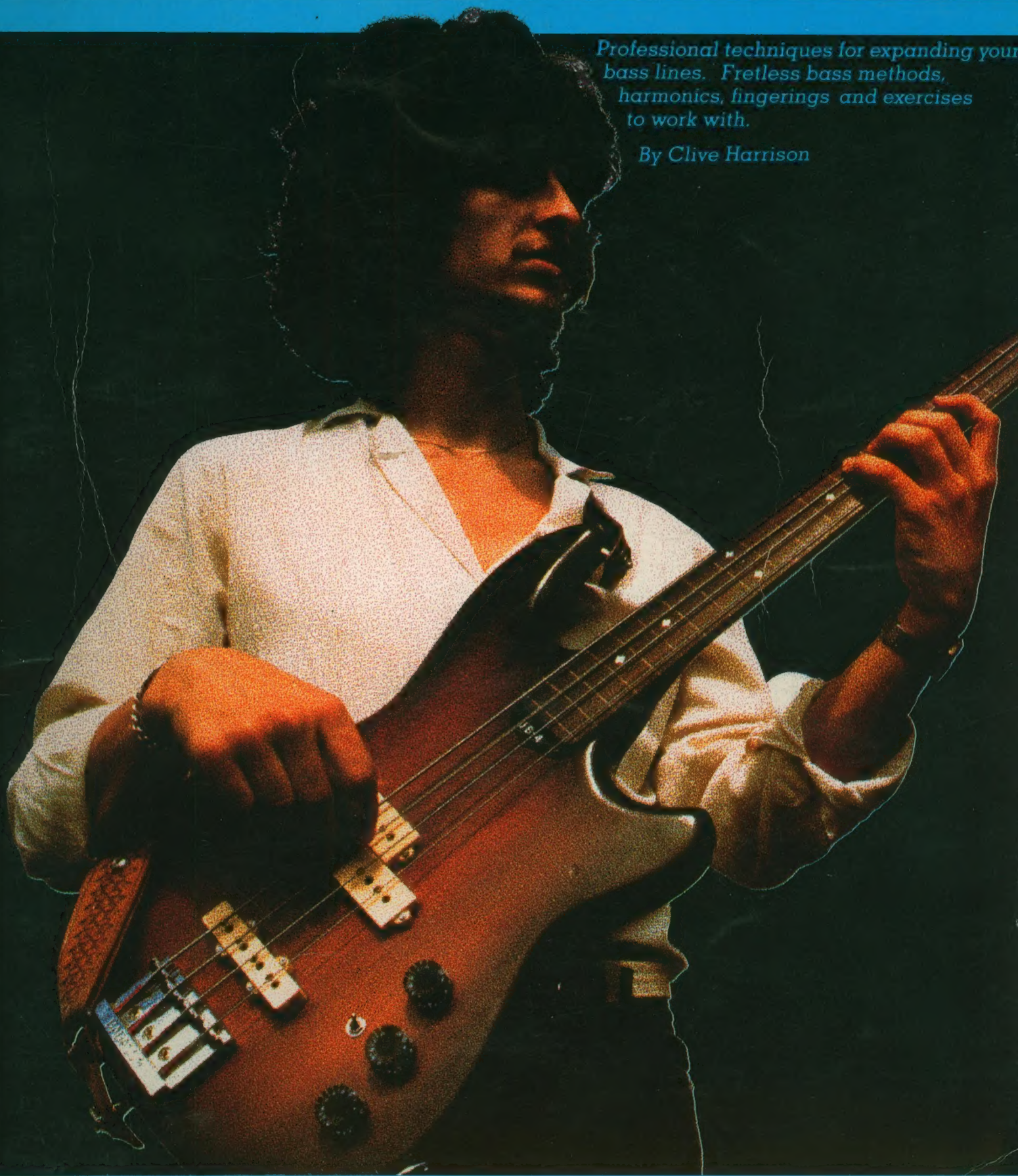


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By Clive Harrison

recording with the greats of Rock, Pop, Country, Funk, Disco, Jazz and Fusion music, and has recorded hundreds of commercials for Radio and Television, as well as many Film scores. Australian groups he has worked with include:

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At the time of writing he is working with his band RISK, finishing his first solo album, and doing tracks for film and music.

Clive Harrison "... an excellent and unique musician."

Glenn Wheatley (Manager, Little River Band) "... one of the finest bass players this industry has produced."

Sydney Morning Herald "... a brilliant accompanist ... at the same time a soloist."

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BIOGRAPHY

Clive Harrison was born in Adelaide, South Australia in 1955. After studying piano, classical organ and guitar in his early teens he took up electric bass in 1972, and acoustic bass in 1976. Since 1975 he has been heavily involved in recording work and live performance, in the areas of Rock, Pop, Country, Funk, Disco, Jazz and Fusion music, and has recorded hundreds of commercials for Radio and Television, as well as many Film scores. Australian groups he has worked with include:

Little River Band, Kush, Avalanche, Crossfire, Galapagos Duck, Kerrie Biddell and Compared to What, Swanee, Brian Cadd and the Bootleg Band, Brian Brown Quartet, Renee Geyer, Ricky May Bigband, Mike McLelland, Jon English, Darryl Braithwaite, Mike Brady, Richard Clapton, Glenn Cardier, Glenn Shorrock, Graham Goble and Beeb Birtles, Colleen Hewett, Billy Thorpe, Doug Ashdown, Kevin Johnson as well as scores of other artists.

At the time of writing he is working with his Sextet RISK, finishing his first solo album, and doing freelance live and studio work.

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INTRODUCTION

A few years ago a certain Bass-player released an album which caused quite a stir in the world of Jazz. Those Bassists who are surviving the impact of that release probably continue to follow Jaco Pastorius' work with a mixture of excitement, delight, frustration, dismay, anguish and hysterical laughter at the man's audacity and ability to perform apparently impossible gymnastics on the bass, while a fortunate few have risen to the task and used the album as a kick-off point for a whole new viewpoint to playing the instrument.

For those who have yet to recover, take heart; contrary to popular belief, there is hope. Jaco was not the first to emphasize the ever-changing role of the Bass . . . Stanley Clarke, Mingus, Scott La Faro, Niels Ørsted Pedersen, Ray Brown, Ron Carter and a host of others have all left an indelible mark in shaping the future of the bass. Who knows, someday someone will probably record "Flight of the BumbleBee" on the bass. Maybe they already have! It all goes to show that there really is no limit to what YOU can do on the instrument. Take a look around. Is anyone stopping you?

Whenever you approach the study of music and/or playing the bass there are a few things to know that may prevent you from throwing the instrument out the window and yourself off the nearest cliff in despair.

The first one is Gradients, or more to the point, studying at Too Steep a Gradient. Trying to run before you can walk, biting off more than you can chew, call it what you will. There was a time I remember when I was trying to get the hang of playing on a jazz tune called "Donna Lee". You may have heard the tune on the first Pastorius album. It was originally recorded by Charlie Parker back in the Bebop days. Well, on this day I was taking turns playing the head (melody) and soloing with a guitarist friend who knew the piece quite well. I'd been into jazz only a few months at that stage. So I found myself wading through these fast chord changes that seemed like the Encyclopedia of Musical Heartbreak on an instrument more fit for Gorillas than Humans, with the dexterity of a Sherman Tank and the success of the Titanic on its maiden voyage.

In retrospect what I was attempting was musical suicide, brought about by taking on Too Steep a Study Gradient. My time would have been better spent tackling a tune which was slower, with less chord changes and more time for me to make some progress.

When I was in my teens I had my first opportunity to play with an orchestra. I had scant knowledge of music, very little reading ability, and had not listened to much classical music. I had just gotten my hands on a bass, and had been playing it about two months, and there I was with about thirty other string players, all of whom seemed to be able to read music about as fast as I could read a newspaper. As we launched into the first piece I looked at my part in bewilderment, at a mass of notes, dots, lines, squiggles and words in a foreign language. In desperation I scanned the part looking for something I could play and finally settled on two bars of open "D"s on page two. Eight notes altogether. Wiping enormous quantities of resin on my bow I counted the bars leading up to my chosen bars, then, with the fury of Genghis Khan I let fly eight of the loudest, roughest, most unmusical "D"s you ever heard. That's all I played for the entire rehearsal. Again, Too Steep a Gradient.

So give yourself a chance when you play or study or practice. Set yourself a reachable goal, practise a step at a time, make sure you've got each piece of data

before moving on, and don't be too tough on yourself. That way you'll end your practice sessions satisfied that you've achieved something and avoid overwhelming yourself.

The second thing to watch for when studying something new is that there is often a tendency to bury your head into a textbook for hours without coming up for air. There is a limit to how much significant data an individual can assimilate on a given subject at one time. At some point you have to apply the data to your work. OK, so here's a book about playing music on the bass, that does have some sections which involve assimilating a lot of data. So have your bass ready, and each new datum can and should be applied as it comes up in the text. Each time a piece of written music comes up — play it on your instrument. Don't let the data swim around in your head. Play it, have a listen to it, turn it from a piece of significant data into a piece of music. The stuff on Modes, play it ALL as you go along. The stuff on communication, try it out on an audience, whatever you have to do to get the data out of the book and into use. So instead of a lot of muddled words, you have a musical idea there in its place.

OK, so you're taking everything at a comfortable gradient, and you're playing all the stuff on the bass, and trying it out on the bandstand. Great! There's one other point, probably the most important, and that is the subject of Misunderstood words.

Misunderstood words probably account for more confused musicians than any other single cause. And more confused Doctors, Motor Mechanics and Garbage Collectors. There is no way you can fully comprehend the vast concept of music as a whole if you don't understand the nomenclature (words used to describe it). You may be able to grasp sections of it, but I'm talking about becoming really knowledgeable. It's a bit rough at the moment because many of the words used to describe Pop, Rock, Funk and Jazz music haven't made it into the dictionary yet. But there is an increasing number of books now being made available which cover the vast majority of those terms, so with a little investigation and detective work, you should be able to track down their correct definitions. The time spent hunting does pay dividends and can save embarrassment on the job.

The test of whether you really understand something is, "Can I apply it?" If you can practise it OK at home but don't know how to use it on the job then you'd better start checking those words for understanding. So the three study points are;

- 1 Clear up the terminology
- 2 Play it on the instrument with the view to application
- 3 Apply a comfortable gradient to your practice

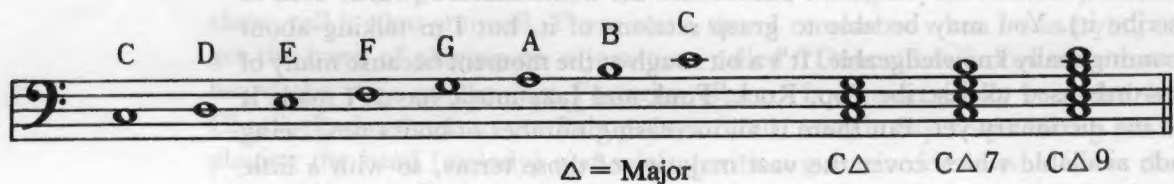
BASICS

In compiling this book I had to decide what standard of player it would be directed towards. So the initial assumption has been made that the reader has an understanding of basic music theory and can read bass clef. There are many books already available that deal with those subjects. This book is intended to cover more specifically the immediate problems associated with the various musical situations a bassist may come across.

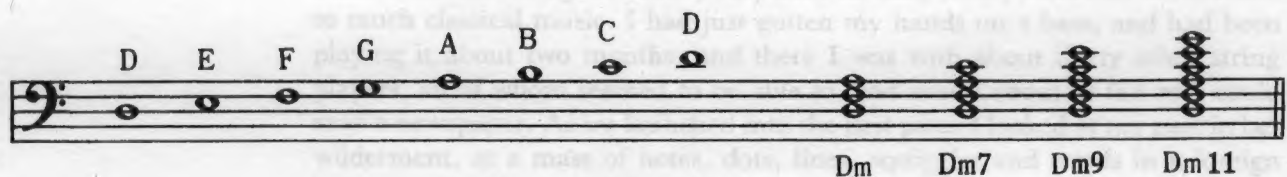
This first book of the series is (among other things) concerned primarily with the Major Scale, its Modes, related chords and arpeggios. The books to follow will discuss the Harmonic Minor Scale, Ascending Melodic Minor, Altered, Diminished, Whole Tone, Chromatic, Pentatonic scales and their Modes as well as some of the other more advanced technical aspects of playing the Bass.

Major scale and its modes

Firstly we'll look at the C Major Scale and its Modes.

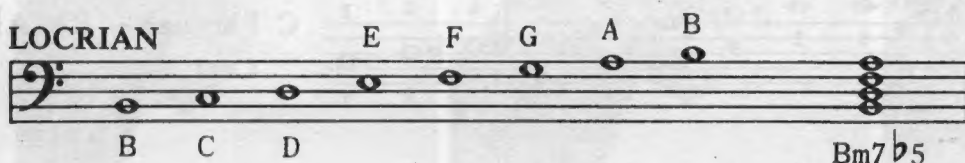
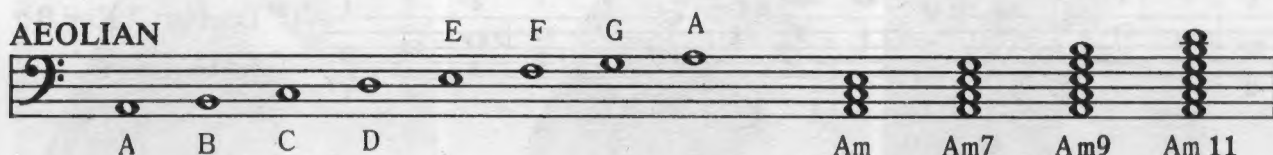
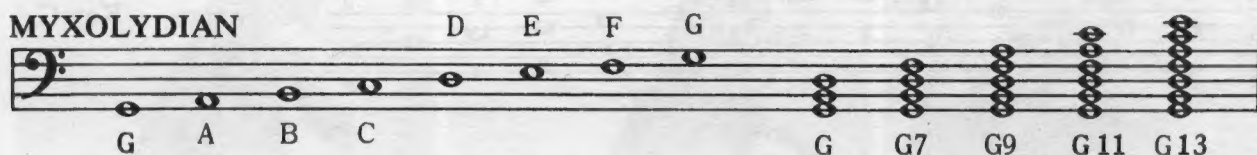
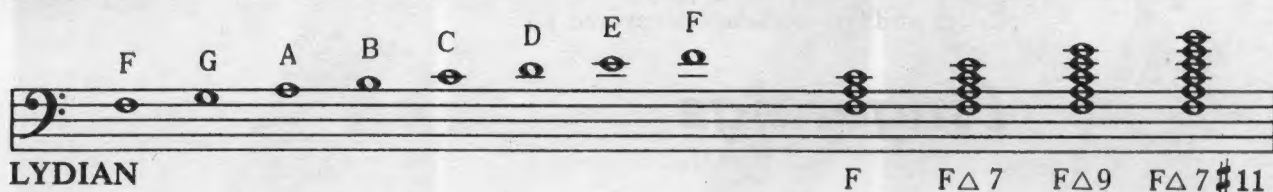
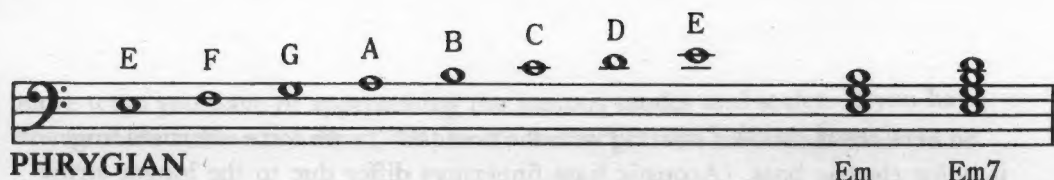


Here we have the notes of the C Major Scale, and the notes that can be included when the following chords are written; C Major, C Major 7th, and C Major 9th. We're in the key of C, and from those notes we can derive the seven modes of the major scale. The first mode, the Ionian mode, is the same as the scale above. So we have the C Ionian mode. Let's now look at the second mode, the D Dorian mode. (We're still in the key of C.)



It's the same notes as those in the Ionian mode, and the same key, except in this case we're starting on "D", and going up an octave. So pick up your bass and play them if it's not clear, and play the arpeggios that go with the two modes, the Ionian and the Dorian.

In the same way we can present the five other modes of the C Major Scale;



Here then we have the seven modes of the C Major Scale. The C Ionian, D Dorian, E Phrygian, F Lydian, G Myxolydian, A Aeolian and B Locrian. One can also think of them as the seven modes which relate to the following chords; C Major, D Minor 7th, E Minor 7th, F Major 7th, G7th, A Minor 7th and B Minor 7th Flat 5th. If, however, we were to take each of these modes, and transpose them such that they ALL started from C and went up one octave, we would then have seven modes, all which would relate to a different given key. We would have C Ionian, C Dorian, C Phrygian, C Lydian, etc.

For example, take the Locrian mode given in the figure above. It is in the key of C, therefore you'd call it B Locrian, and you'd use it against a Bm7 flat5 chord. (Also known as B Half-Diminished). The intervals between the notes of that mode run as follows; $\frac{1}{2}$, 1, 1, $\frac{1}{2}$, 1 1 1. Half step, whole step, whole step etc. If we take that mode, and play the same intervals, but start our mode on the note C, moving through the octave to the C above, we would get the C Locrian scale, (C, Dflat, Eflat, F, Gflat, Aflat, Bflat, C), which we can use against the Cm7 flat5 chord. And that would put us in the key of Dflat. Try it on your bass.

Why do you need to know all this stuff? And why do you need to know about these modes in two different approaches? Here's why. Say someone says to you, "I want you to work out a bass line, or Solo, over this chord". Which happens to be a Dm7 chord. So you immediately know you can think of it as a Dorian scale, or a Phrygian or an Aeolian, depending on the key you're in. Because you've practised your D Dorian, Phrygian, Ionian, Locrian, etc, you don't have to hesitate to work out what scale to use. And because you've practised the other way, you'll know that if the mode is D Dorian, then you're in the key of "C", so you can look at it as C Ionian, D Dorian, E Phrygian, etc. So you not only know what you can play over it, you also can fool around in 7 different modes and it'll still work!

So here are the modes starting with the note "C", with some alternate fingerings for electric bass. (Acoustic bass fingerings differ due to the longer string length and larger distances covered.)

Fingerings

	C Ionian — Key C CΔ7
	C Dorian — Key Bb Cm7
	C Phrygian — Key Ab Cm7
	C Lydian — Key G CΔ7 #11
	C Mixolydian — Key F C7
	C Aeolian — Key Eb Cm7
	C Locrian — Key Db Cm7b5 or Cø

The numbers (1,2,3,4) refer to left hand fingerings, and the short arrows are used to indicate a shift of hand position. (Up or down a whole step). There are many combinations of fingerings possible for these modes. The one I have written above the notes is a fingering you can use if you wish to stay in one hand position. The fingerings written below are for when a shift of hand position is necessary or desirable. There are many more, so experiment to find different fingerings to suit your needs. The larger your repertoire of hand positions, the

more ways you have of approaching the various modes and scales. If you have any problems, have a look at chapter 2, the section on Shifting Exercises.



Fig. 1 Closed fingering



Fig. 2 Extended fingering



Fig. 3 Incorrect thumb position

Extended fingering

Extended fingering is simply stretching the fingers in order to reach inaccessible notes, say for example to play a Major 3rd interval on the same string. Personally, I'd recommend using shifts rather than extended fingering wherever possible — for two main reasons. Firstly, if you play or have any desire to someday take up the acoustic bass, you'll find it very difficult to play a third interval on the acoustic bass, especially in the lower positions. So in order to facilitate a change over at a later stage it would be a good idea to become proficient at shifting. Secondly, in order to hold down a major 3rd interval on one string you'll need to exert more pressure upwards from your thumb (as a lever by which to get a wider stretch). This added pressure from the thumb on the back of the neck has a tendency to restrict movement of the hand along the neck, which is undesirable. So I consider the shift to play an important and integral part in enabling you to have freedom of movement up the neck. I see a lot of players "stuck" in one hand position for each chord they play, and I think the inability to shift with confidence plays a major part in that inability, so I have included a series of exercises in Chapter 2 on Shifting.

Another common habit is to hook the thumb around the edge of the neck (Fig 3). I think this originally became fashionable with Blues guitarists in order to gain extra leverage for the many string "bends" they employ. So if you're wishing to bend the strings on your bass, then I guess you're entitled to. I can't think of any other reason for wanting your thumb wrapped around the neck. I don't think the thumb needs to see what's going on up there on the fingerboard;

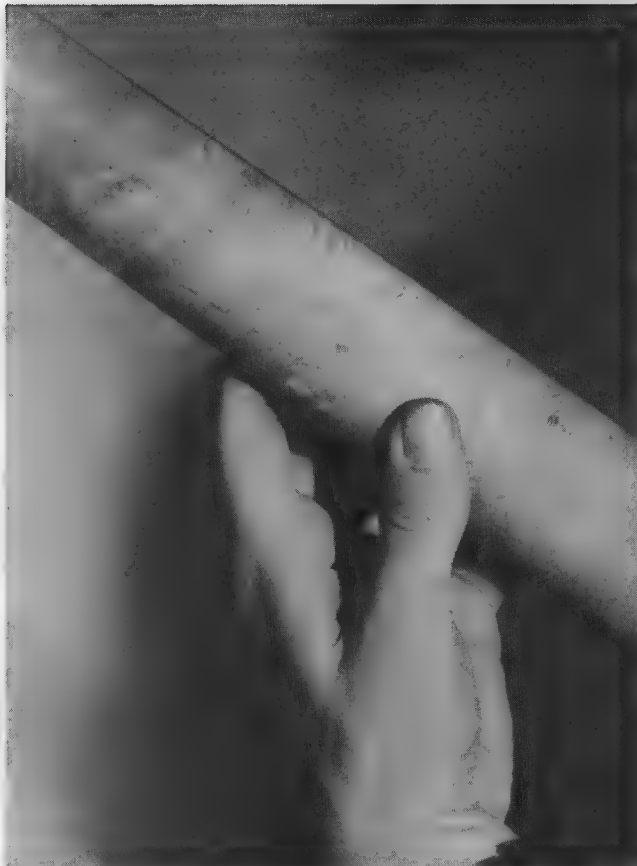


Fig. 4 Correct thumb position



Fig. 5 Correct thumb position

in fact I'd imagine it's quite content really to stay down in the engine room keeping things running smoothly (Fig 4 & 5). It will put in years of good performance as an anchor for the more gymnastic fingers. I don't mean, however, that it should be glued in place nor should it be pressing hard. In fact there should be very little pressure there at all, for the more pressure there is, the harder it is to move it. And if you get caught in the wrong hand position you may want to make a quick getaway.

Right Hand technique

Not much has been written on the subject of right hand technique. The technique of plucking the strings by the way is called Pizzicato. I've seen guys use all kinds of ways to get a noise out of a bass. Plucking, hitting, thumping, snapping, popping, slapping, pulling, dragging and breaking strings. With their First, Second, Third, Fourth, Fifth, Sixth fingers, thumbs, picks, palms, nails, hammers and anything else they can get their hands on. Strange lot we bass-players! I've tried most of the above, and have pretty much settled for first and second fingers for most things, thumb and first finger for slapping and popping strings, and the pads of first, second and third for harmonics. Here's a rundown of a few of the techniques and their advantages/disadvantages as I see them:

First and Second: Great for even eighths and sixteenths. Can be very powerful and fairly natural. Can be difficult to articulate triplets so they don't sound like they're grouped in twos. (Fig 6)

First, Second and Third: Good for triplets, even eighths can tend to sound like groups of three. Can make string crossing more accessible. (Fig 7)



Fig. 6



Fig. 7



Fig. 8

Thumb: Great for “Slapping” (usually hitting the string with the side of the first knuckle on or about the highest fret [Fig 8]). Very percussive, although it can be difficult to get a rapid succession of notes, like five 16ths in a row. It is important to hit and release the string quickly so as to avoid “killing” the string as it bounces back. The left hand plays an important role in stopping the string and hammering notes. (See Thumb exercises, Chapter 2.)



Fig. 9

Snapping: Hooking a finger under the string and releasing it so that it snaps back against the fingerboard (Fig 9). Or taking it between thumb and forefinger and releasing for a similar effect (Fig 10). Not particularly fast as a device by itself but used in conjunction with the thumb in a wrist-rocking motion and with left hand stopping and hammering can be used to create some very fast and percussive lines. The thumb can also be used as a snapping finger by hooking the tip under the string and flicking up. (Fig 11)



Fig. 10



Fig. 11



Fig. 12 Nails

Nails: Can be used to good effect to accentuate harmonics or simply to increase definition (Fig 12). A few players use them almost exclusively . . . it requires very strong nails or a very light touch. (Listen to Bunny Brunel.)



Fig. 13 Pads

Pads of fingers: (Fig 13) Can work well with harmonics if you desire a harmonic without many overtones. Tends to sound less stringy and a bit thicker.

Many acoustic bassists use the fleshy part of their first and/or second finger for walking lines etc (Fig 14). Tends to kill the unwanted harmonics and accentuate the fundamental, which results in a full, rich sound, and ensures that the belly has every opportunity to resonate fully. Players can almost "caress" a very long, swelling note out of the bass:



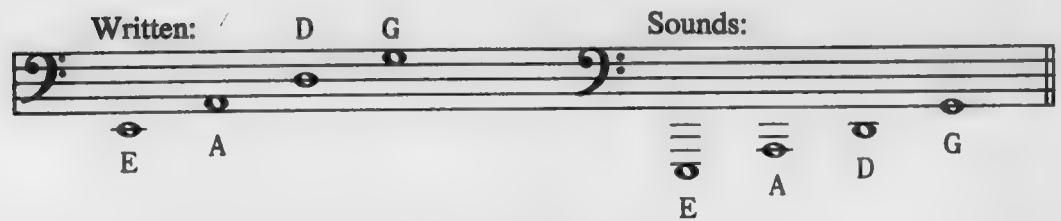
Fig. 14

Palms: Actually the face of the fingers, first and second, between first and second knuckles, on the fleshy side. You just hit the strings, back near the bridge, quite hard, whilst holding down octaves with the left hand. Sounds percussive and can be quite fast, although it's easy to hit the other strings and cause the inevitable extraneous noise.

There are other ways, try them all . . . each one has its advantages and disadvantages, but each one may lead to an innovative new style.

Range

Just as a final note on basics, a lot of players I've met get confused about the range of the instrument. Where it's written in Bass clef is actually an octave above where it sounds:



So your low, open E is actually the third E note below middle C. It can tend to sound higher depending upon the harmonic content of the sound you're using at the time. A "honky" sound, for example, is accentuating some of the middle order harmonics which are much higher in pitch, so the fundamental can at times constitute really a small percentage of the total harmonic content.

EXERCISES

The following pages contain exercises designed to familiarise the player with some of the shapes and movements which can be employed using only the Major Scale as a starting point, moving through its various modes, related chords and hand positions for the key of C. These exercises can and should be practised in all twelve keys, but for the sake of simplicity they are written here in C, bearing in mind that once you are familiar with each of the exercises in the key of C it should be fairly simple to transpose into the other keys.

Fingerings have not been included, as there are countless possibilities, so I leave it up to the reader to experiment. Be aware that most of the exercises can be played both vertically and horizontally (i.e. across the fingerboard and up the fingerboard). So try both methods wherever possible to see which method is the most accurate and simple to execute. The horizontal method may seem more difficult at first but persistence with it will pay dividends in the long term.

Synchronisation of right and left hands

Many bassists I know have expressed the desire at some stage or other to have greater speed in their playing. There are no short-cuts, the only way to play faster is to practise. But what and how you practise has a lot to do with how fast you can play. In order to play fast both hands need to be able to move very quickly, but that alone is not enough. The real index of speed is synchronisation of right and left hands. In other words, your right hand (if you're right handed) must be able to pluck the string at *exactly* the split second the left hand anchors the string against the fingerboard. If the right hand plucks a split second *before* the string is anchored you'll get a dead note. That's obvious. If that pluck occurs a split-second *after* the string is anchored you'll hear a very tiny "breath" between notes. Try it. Play a "C" scale starting on the A string and moving across the strings to the C on the G string. If you listen very carefully you should be able to detect a slight "breath" between the notes. That breath is the time lapse between the end of the last note and the attack of the next, and the way to eliminate or minimise the breath is by practising slowly. Before you dismiss such a small flaw as being insignificant to the pursuance of speed, take a look at this.

Say the average breath in your playing of scales, at any speed, was 1/20th of a second. If you're playing half notes (minims) at 60 beats/minute, then the breath will constitute 1/20th of the total length of the minims. If you then play quarter notes (crotchets), with the same average breath, the quarter notes will have 1/10th cut off the end of them. Eighth notes will be only 4/5ths their full value. Sixteenths will be only 2/5ths their full value, and thirty-seconds will be 1/5th note, 4/5ths breath! Which doesn't make for very smooth playing. So a breath of 1/20th of a second would make it very difficult to play sixteenths or thirty-seconds smoothly.

So that breath, or lack of synchronisation, must be overcome or at least minimised in order to play fast. So when you practise the exercises in this book, especially the Time exercises, listen for the breath and minimise it, on the slow notes especially, because a small breath makes for a fast line!

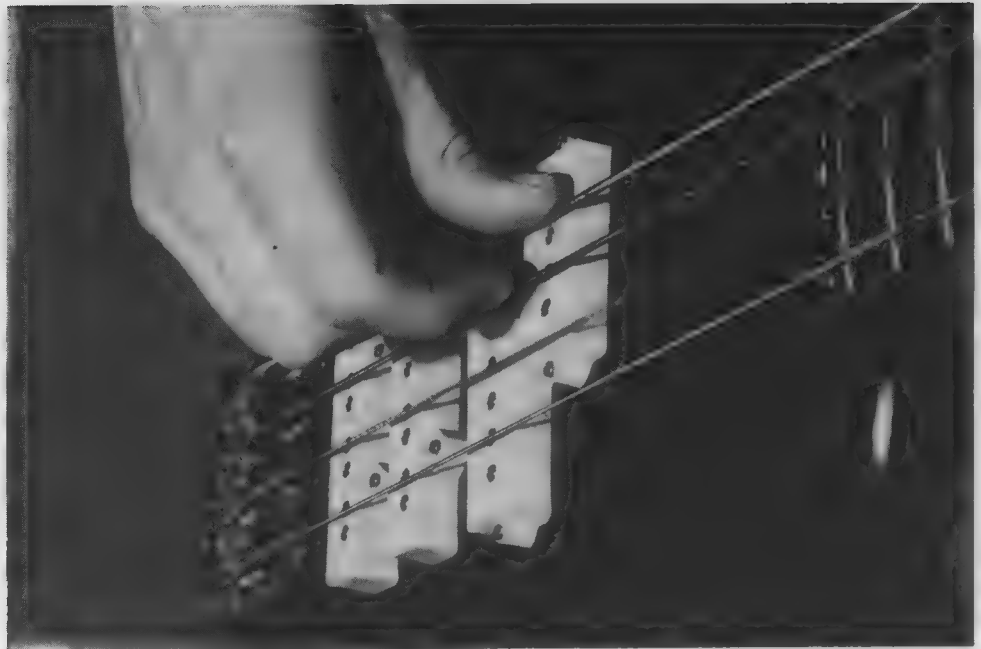


Fig. 15 Free stroke

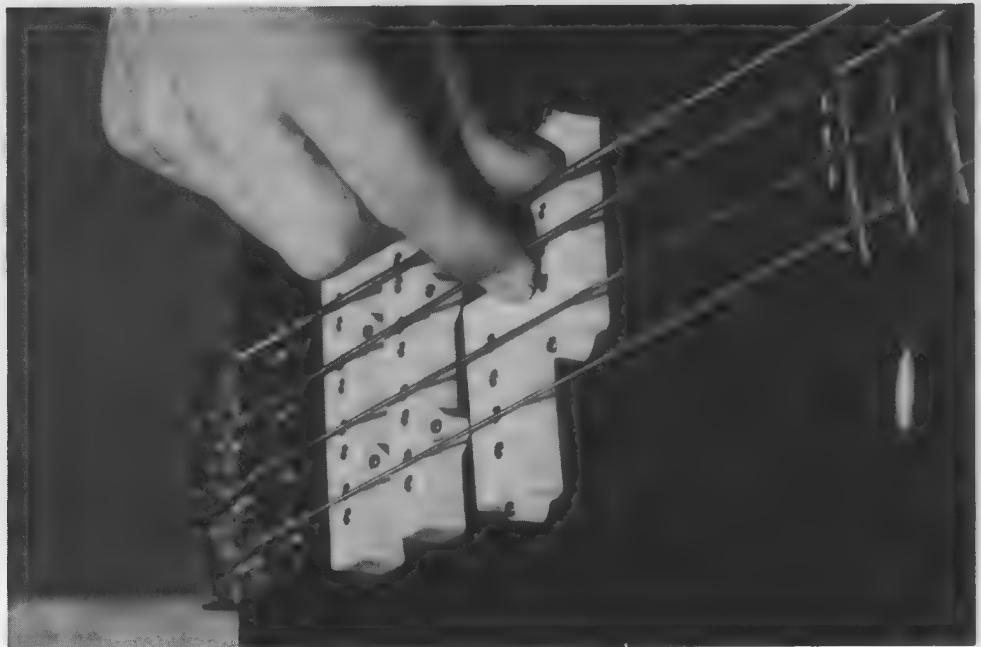


Fig. 16 Rest stroke

Free strokes/Rest strokes

A free stroke is simply plucking the string *without* coming to rest on the adjacent string (Fig 15). A rest stroke is plucking the string such that the finger comes to rest on the adjacent string (Fig 16). The rest stroke is the more common of the two, as it enables a quicker recovery to the same string, and prevents unnecessary travel of the plucking finger. However it does dampen the string on which it comes to rest, which is undesirable if you're playing chords, so in that situation I'd recommend free strokes. Some bassists use free strokes exclusively to good effect, so I'm not saying it's wrong, but like I said in chapter one, there are many ways to get a noise out of a bass: you should try them all.

The Exercises

1,2 As with all these exercises, they should be practised in every key, but once you are familiar with the pattern in "C" you shouldn't have any difficulty in transposing. (You will, however, need to make adjustments in fingering when you need or desire to use open strings. As a general rule I avoid open strings with the electric bass wherever possible so as to maintain consistent timbre (quality of tone.)

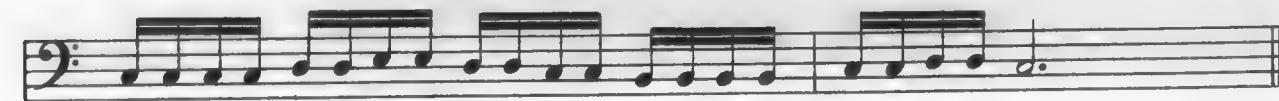
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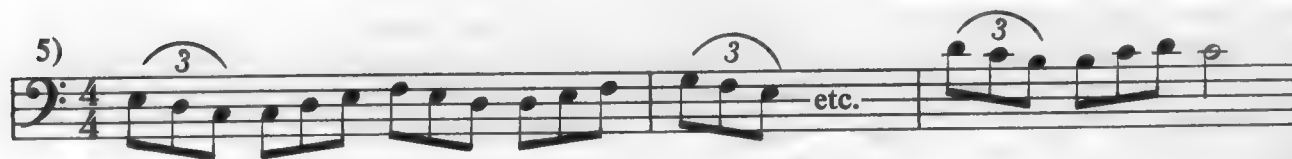
3,4 I've included triplet and sixteenth versions here as in exercises one and two as the right hand fingerings differ in each case.

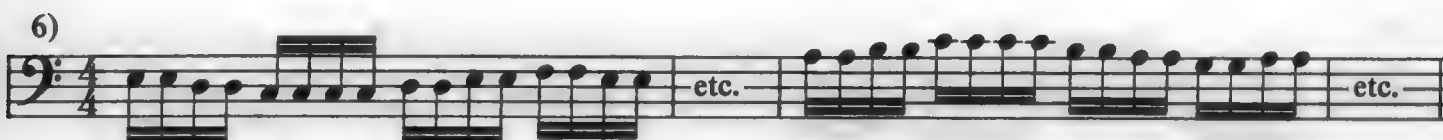
When practising these exercises, what you are in fact doing is committing these movements to muscular memory. I'd like to point out here that your muscles don't really know a right note from a wrong one. They only know the movements as you taught them. Your ear tells you correct and incorrect notes. So practise the exercises with the viewpoint of teaching the muscles the exact, correct movements, from start to finish. If you practise the mistakes, your muscles will reproduce those mistakes in performance. So practise only the correct movements, even if it means playing the exercise at an excruciatingly slow tempo for a while.

3)



5,6 Similar to the above. From this point on I'll just give you the start of the pattern and you can continue it up or down the instrument as you like.





7 In the ascending part of this exercise you may find it easier to bar with the left hand across two strings with 1st 2nd and 4th fingers in order to play the fourth intervals (Figs 17 & 18). When you descend, you should be able to play it without any barring.



Fig. 17



Fig. 18

8 More stuff. Remember to teach your muscles the whole exercise accurately.



9 Get it nice and clean and precise. It's better to practise them slowly and correctly than to learn them fast, clumsy and with uneven time.



10 Don't forget to pat yourself on the back when you play them well.



11 You'll probably need to bar, and you may need a rapid shift to go from



12 A to D in bar two. On the descend, try anticipating the fourth movements by barring before you get to them. Use the bar on the C preceding the G. Or alternatively, grow some more fingers!

12)



13 More stuff.

13)



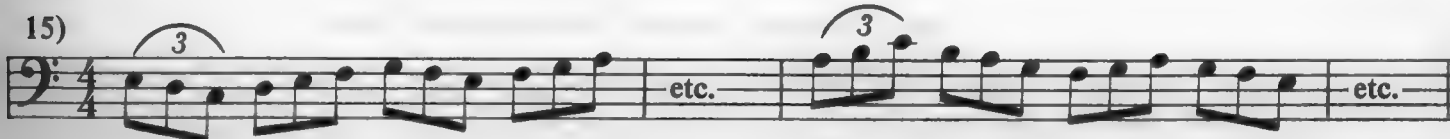
14 If you're this far without a break, award yourself a coffee.

14)



15 More stuff

15)



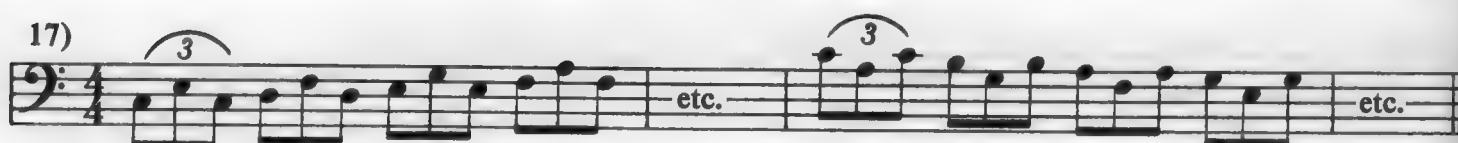
16 More stuff

16)



17 Ascending, L.H. fingering. I use 2,4,3 for the triplet F,G,B, which some 18 may find awkward. So persist with it. You'll also need one shift.

17)

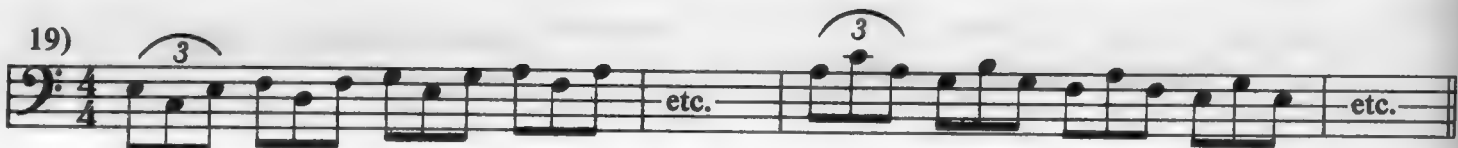


18)



19 More stuff

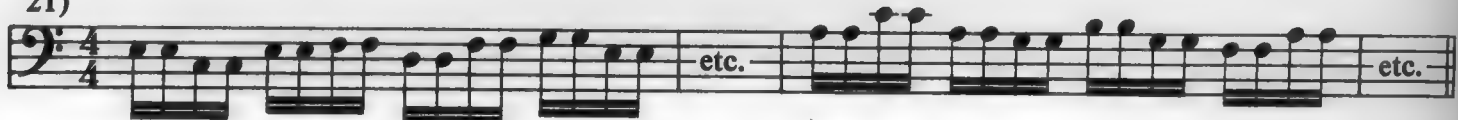
19)



20 The invisible exercise. Not as hard as it looks.

21 More stuff

21)



22 Now it gets really heavy; four notes of the scale in a row!

22)



23 At this stage it would be wise to start playing the exercises over two octaves.

23)



24 If you start to get that sinking feeling, remember the Titanic and gradients. Make sure all the previous exercises are cool, and if necessary, just zero in on exercise 23 for a while until it's strong. You'll need plenty of shifting from here on, so if that gives you any trouble, have a look at the Shifting exercises for a while, then come back to these ones.

24)



25 More stuff

25)



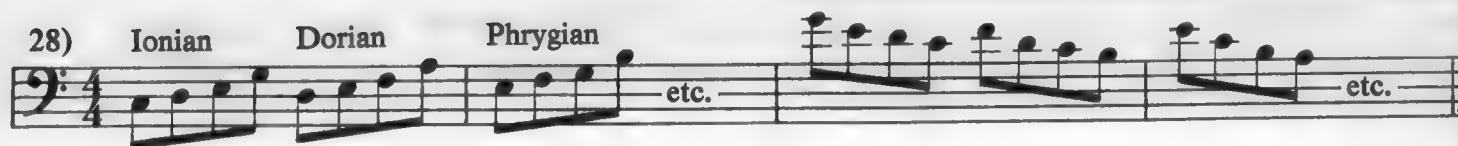
26 Try to work a fingering for this like the following: (Left Hand), 1,1,3,4,1,1,2,3,1,1,3,4,1,1. And shift hand positions after each four note group.



27 Try 1,1,4,3,1,1,3,2,1,1,4,3,1,1, etc.



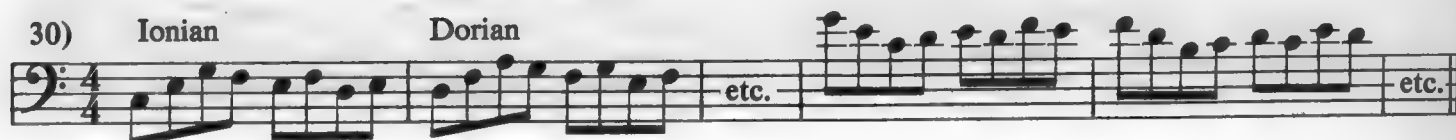
28 Treat the next four exercises as a study in each of the modes, moving into a new hand position for each mode.



29 There are other ways, using alternate hand positions for some of the modes.



30 So experiment.



31 More stuff

31)



32 This and (33) can be practised in one hand position.

32)



33 Will need some barring.

33)



34 This one's a trick. Use the same hand position right down to the low "F" if possible. You'll also need some awkward shifts, jumps and barring. Try playing it up an octave so you can't use open strings. Hours of fun for the whole family!

34)



35 Try starting this one from the "C" on the E string. That will make it a little less like an obstacle course.



36 These ones shouldn't be too hard, work on getting the shifts clean



37 and try to minimise the sliding sound of the shift. Try to make



38 the shift lightning fast and accurate, and go for good synch. of



39 right and left hands.

39)



40
41 More of the above.

40)



41)



42 Try these ones starting on the "C" on the E string. You should be
43 able to get to them all with only one shift up and one shift down.

42)

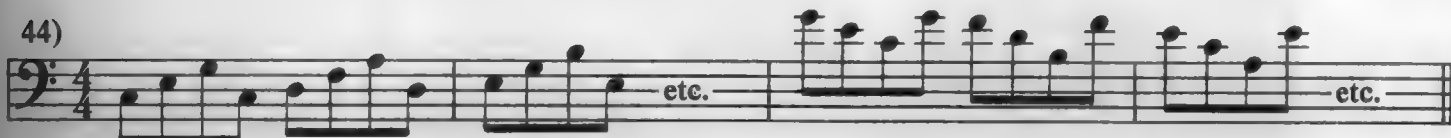


43)



44 Work on getting that left hand moving accurately and with good

44)



45 independence of the fingers.

45)

46
47

46)

The exercise is written on a single staff with a bass clef and a 4/4 time signature. The first line contains a sequence of eighth notes: G2, A2, B2, C3, D3, E3, F3, G3, A3, B3, C4, D4, E4, F4, G4, A4, B4, C5, D5, E5, F5, G5, A5, B5, C6, D6, E6, F6, G6, A6, B6, C7, D7, E7, F7, G7, A7, B7, C8, D8, E8, F8, G8, A8, B8, C9, D9, E9, F9, G9, A9, B9, C10, D10, E10, F10, G10, A10, B10, C11, D11, E11, F11, G11, A11, B11, C12, D12, E12, F12, G12, A12, B12, C13, D13, E13, F13, G13, A13, B13, C14, D14, E14, F14, G14, A14, B14, C15, D15, E15, F15, G15, A15, B15, C16, D16, E16, F16, G16, A16, B16, C17, D17, E17, F17, G17, A17, B17, C18, D18, E18, F18, G18, A18, B18, C19, D19, E19, F19, G19, A19, B19, C20, D20, E20, F20, G20, A20, B20, C21, D21, E21, F21, G21, A21, B21, C22, D22, E22, F22, G22, A22, B22, C23, D23, E23, F23, G23, A23, B23, C24, D24, E24, F24, G24, A24, B24, C25, D25, E25, F25, G25, A25, B25, C26, D26, E26, F26, G26, A26, B26, C27, D27, E27, F27, G27, A27, B27, C28, D28, E28, F28, G28, A28, B28, C29, D29, E29, F29, G29, A29, B29, C30, D30, E30, F30, G30, A30, B30, C31, D31, E31, F31, G31, A31, B31, C32, D32, E32, F32, G32, A32, B32, C33, D33, E33, F33, G33, A33, B33, C34, D34, E34, F34, G34, A34, B34, C35, D35, E35, F35, G35, A35, B35, C36, D36, E36, F36, G36, A36, B36, C37, D37, E37, F37, G37, A37, B37, C38, D38, E38, F38, G38, A38, B38, C39, D39, E39, F39, G39, A39, B39, C40, D40, E40, F40, G40, A40, B40, C41, D41, E41, F41, G41, A41, B41, C42, D42, E42, F42, G42, A42, B42, C43, D43, E43, F43, G43, A43, B43, C44, D44, E44, F44, G44, A44, B44, C45, D45, E45, F45, G45, A45, B45, C46, D46, E46, F46, G46, A46, B46, C47, D47, E47, F47, G47, A47, B47, C48, D48, E48, F48, G48, A48, B48, C49, D49, E49, F49, G49, A49, B49, C50, D50, E50, F50, G50, A50, B50, C51, D51, E51, F51, G51, A51, B51, C52, D52, E52, F52, G52, A52, B52, C53, D53, E53, F53, G53, A53, B53, C54, D54, E54, F54, G54, A54, B54, C55, D55, E55, F55, G55, A55, B55, C56, D56, E56, F56, G56, A56, B56, C57, D57, E57, F57, G57, A57, B57, C58, D58, E58, F58, G58, A58, B58, C59, D59, E59, F59, G59, A59, B59, C60, D60, E60, F60, G60, A60, B60, C61, D61, E61, F61, G61, A61, B61, C62, D62, E62, F62, G62, A62, B62, C63, D63, E63, F63, G63, A63, B63, C64, D64, E64, F64, G64, A64, B64, C65, D65, E65, F65, G65, A65, B65, C66, D66, E66, F66, G66, A66, B66, C67, D67, E67, F67, G67, A67, B67, C68, D68, E68, F68, G68, A68, B68, C69, D69, E69, F69, G69, A69, B69, C70, D70, E70, F70, G70, A70, B70, C71, D71, E71, F71, G71, A71, B71, C72, D72, E72, F72, G72, A72, B72, C73, D73, E73, F73, G73, A73, B73, C74, D74, E74, F74, G74, A74, B74, C75, D75, E75, F75, G75, A75, B75, C76, D76, E76, F76, G76, A76, B76, C77, D77, E77, F77, G77, A77, B77, C78, D78, E78, F78, G78, A78, B78, C79, D79, E79, F79, G79, A79, B79, C80, D80, E80, F80, G80, A80, B80, C81, D81, E81, F81, G81, A81, B81, C82, D82, E82, F82, G82, A82, B82, C83, D83, E83, F83, G83, A83, B83, C84, D84, E84, F84, G84, A84, B84, C85, D85, E85, F85, G85, A85, B85, C86, D86, E86, F86, G86, A86, B86, C87, D87, E87, F87, G87, A87, B87, C88, D88, E88, F88, G88, A88, B88, C89, D89, E89, F89, G89, A89, B89, C90, D90, E90, F90, G90, A90, B90, C91, D91, E91, F91, G91, A91, B91, C92, D92, E92, F92, G92, A92, B92, C93, D93, E93, F93, G93, A93, B93, C94, D94, E94, F94, G94, A94, B94, C95, D95, E95, F95, G95, A95, B95, C96, D96, E96, F96, G96, A96, B96, C97, D97, E97, F97, G97, A97, B97, C98, D98, E98, F98, G98, A98, B98, C99, D99, E99, F99, G99, A99, B99, C100, D100, E100, F100, G100, A100, B100, C101, D101, E101, F101, G101, A101, B101, C102, D102, E102, F102, G102, A102, B102, C103, D103, E103, F103, G103, A103, B103, C104, D104, E104, F104, G104, A104, B104, C105, D105, E105, F105, G105, A105, B105, C106, D106, E106, F106, G106, A106, B106, C107, D107, E107, F107, G107, A107, B107, C108, D108, E108, F108, G108, A108, B108, C109, D109, E109, F109, G109, A109, B109, C110, D110, E110, F110, G110, A110, B110, C111, D111, E111, F111, G111, A111, B111, C112, D112, E112, F112, G112, A112, B112, C113, D113, E113, F113, G113, A113, B113, C114, D114, E114, F114, G114, A114, B114, C115, D115, E115, F115, G115, A115, B115, C116, D116, E116, F116, G116, A116, B116, C117, D117, E117, F117, G117, A117, B117, C118, D118, E118, F118, G118, A118, B118, C119, D119, E119, F119, G119, A119, B119, C120, D120, E120, F120, G120, A120, B120, C121, D121, E121, F121, G121, A121, B121, C122, D122, E122, F122, G122, A122, B122, C123, D123, E123, F123, G123, A123, B123, C124, D124, E124, F124, G124, A124, B124, C125, D125, E125, F125, G125, A125, B125, C126, D126, E126, F126, G126, A126, B126, C127, D127, E127, F127, G127, A127, B127, C128, D128, E128, F128, G128, A128, B128, C129, D129, E129, F129, G129, A129, B129, C130, D130, E130, F130, G130, A130, B130, C131, D131, E131, F131, G131, A131, B131, C132, D132, E132, F132, G132, A132, B132, C133, D133, E133, F133, G133, A133, B133, C134, D134, E134, F134, G134, A134, B134, C135, D135, E135, F135, G135, A135, B135, C136, D136, E136, F136, G136, A136, B136, C137, D137, E137, F137, G137, A137, B137, C138, D138, E13

[illegible]

48 On the Dm, Em, and Am arpeggios, avoid using extended fingerings.

48)

etc.

etc.

49 It's handy at times to be able to reach a third interval on one

49)

etc. etc.

50 string, sometimes it's more convenient, but you should aim to be

50)

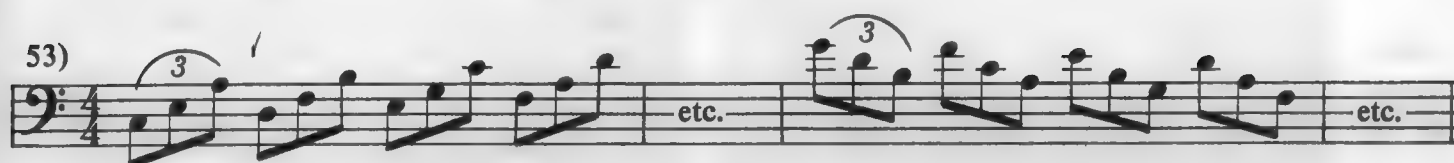
51 able to move quickly without a noticeable change in sound or attack.



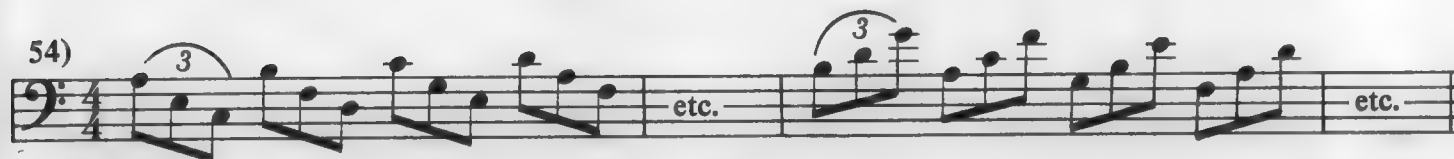


Fig. 20

53 These two spell out all the 6th chords derived from the C scale.



54



55 Try these two starting on the "C" on the E string as well as in the various hand positions in which the root of each mode is on the A string.



56



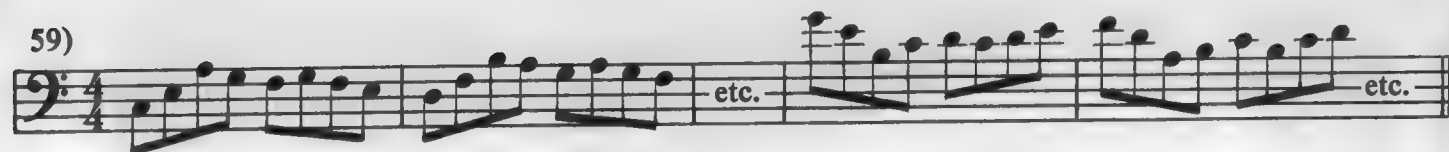
57 Try these two up the neck and across the neck (as in 55)

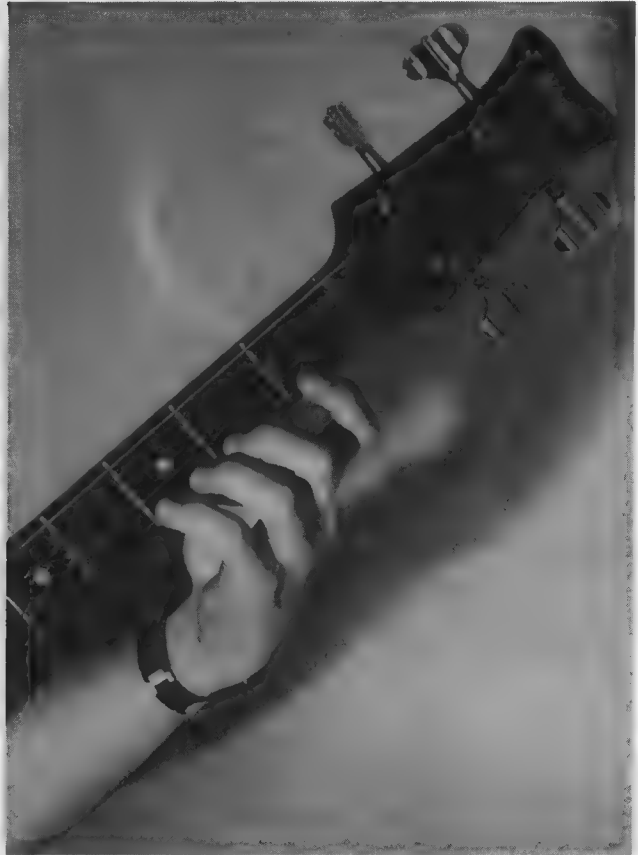


58 As with (57), also try moving to the next hand position for every second triplet ascending and descending. (Anticipate the next hand position.)



59 Play both ways, up and across the neck. When playing up the neck, you'll probably need to anticipate the shifts for some of the modes, but work out the best way with minimum shifts and no extended fingerings.





Horizontal scale of Bb



Fig. 21

Vertical scale of Bb

Shifting exercises

The first exercises are the seven modes of the major scale as played from open E to E at the twelfth fret on the E string. The fingerings written above or below these and the Bflat exercises on the following page include recommended shifting points. There are many possible points at which to shift, but the ones indicated use the minimum number so as to facilitate a smooth scale.

There are basically two types of shift. A very rapid slide up or down the neck which is actually a jump from one position to another, 3 or more semitones away, onto a different finger, and alternatively, where the string is anchored slightly and slid to the new position, to be played by the same finger of the left hand.

So in exercise (1) of the E modes, the shifts from 1 to 1 (marked by an arrow) are played by holding down the Fsharp and rapidly sliding the first finger up to the Gsharp. The shifts from 4 to 1 and 1 to 4 are played by, in the first case,

1) IONIAN



2) DORIAN



3) PHRYGIAN



4) LYDIAN



5) MIXOLYDIAN



6) AEOLIAN



7) LOCRIAN



playing the B natural with the fourth finger, then sliding the first finger rapidly into place for the next note, Csharp. Your fourth finger need not let go of the string until the first is into position ready to take over, so whilst you're sliding into position you can use the fourth to deaden the string so that the note "B" doesn't sound like it slid through the C natural to get to the C sharp. A little practice can make these shifts almost indistinguishable from conventional fingerings.

As a general rule, it is wise to keep as many fingers on the fingerboard as possible at any given time. So if your 4th is holding the note, assist it by keeping 1, 2 and 3 on the string as well, in their correct positions, in readiness to play, and taking the strain off the 4th finger.

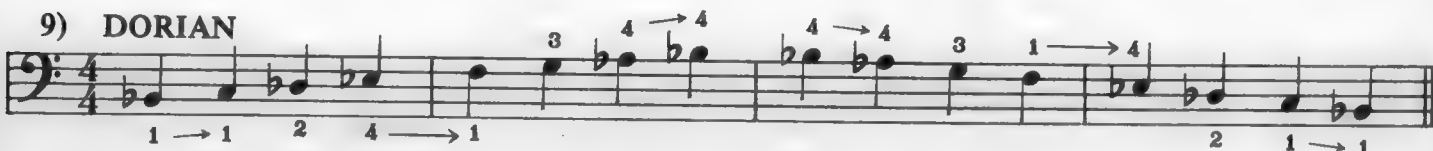
Note also that I distinctly avoided having two consecutive shifts in these exercises. This is so that you have a chance to regain balance and prepare for the next shift necessary.

The second group of exercises use the starting note Bflat, and the fingerings for these can be used in all twelve keys, except when starting on open strings. So once you can play an octave up one string in any mode and any key, the individual shifts in the other exercises in this book should be easy.

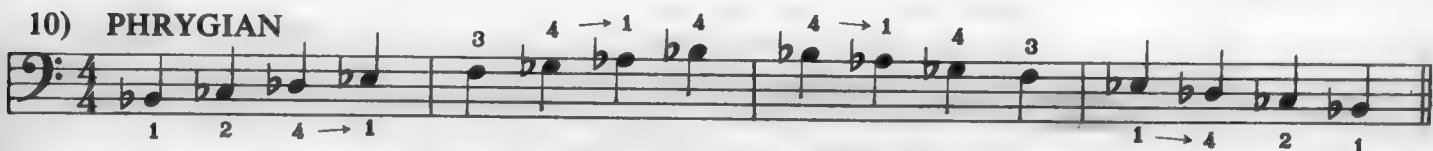
8) IONIAN



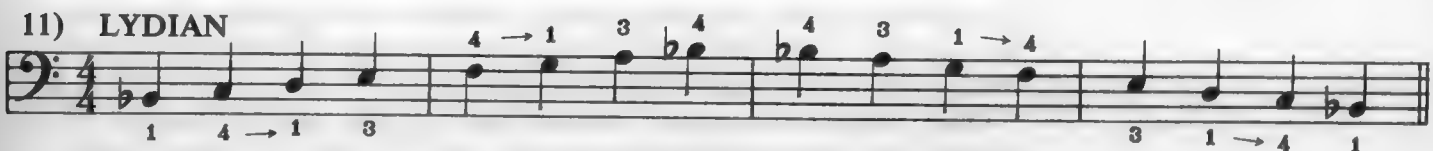
9) DORIAN



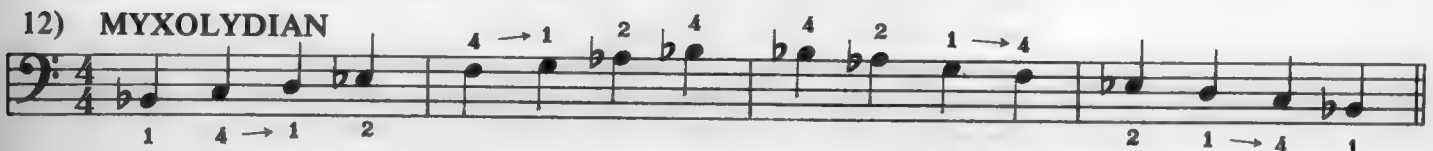
10) PHRYGIAN



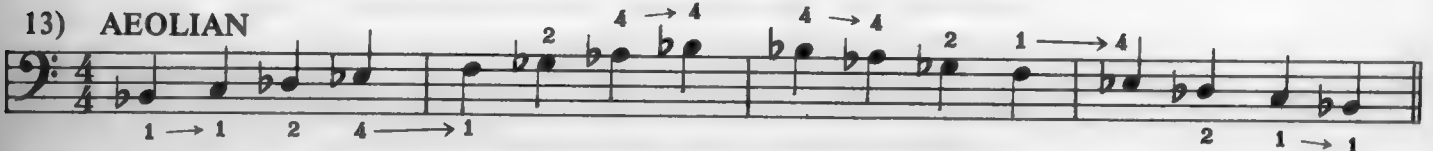
11) LYDIAN



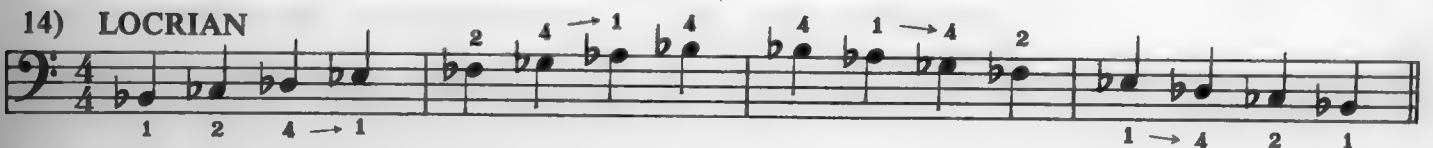
12) MYXOLYDIAN



13) AEOLIAN



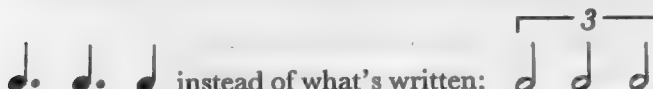
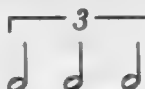
14) LOCRIAN



Time exercises

The two exercises on this page are designed to be practised purely from the point of view of playing accurate time in sync. with a metronome or similar device. You should set your metronome at 60 beats per minute or slower, and count the bars as four beats of the metronome per bar (♩). The first eight bars of exercise 1 may seem very simple, but should not be taken lightly. Those first minims or half notes should be practised meticulously making certain that the attack or pluck of each note falls exactly at the precise split-second that the beat falls on the metronome. It's very easy to play a flam with the beat at that tempo, so get stuck into it with that in mind.

The next 5 bars of exercise 1 may be tricky at first. Make sure you don't play

 instead of what's written;  It's easy to do. In order to play from bar eight into bar nine smoothly, this may help . . .

Three minim (half note) triplets in a bar may be thought of as six quarter note triplets grouped in twos.



So as you're playing along in bars one to eight you can subdivide the minims (half notes) into crotchet (quarter note) triplets. So you're playing ONE . . . TWO . . . and you'd be counting ONE two three TWO two three. Once you have the feel of ONE two three TWO two three firmly in your head and you reach bar nine, you then group the ONE two three, TWO two three into Minim triplets, by counting ONE two TWO, two THREE two etc. You'll find that the beats of the metronome now are falling as underlined; *ONE* two TWO *two* THREE two, *ONE* two TWO *two* THREE two. So you see that second beat of the metronome in each bar falls on a weak beat.

If you're having difficulty, practise just the half notes for a while, with the metronome, then the half note triplets for a while with the metronome until you can feel them comfortably against the metronome beats. Then try going from the first one to the second as in bars eight to nine.

Once you have that together, then play bars 14 to 17, and then bars 1 to 17, working on a smooth transition into bars 9 and 14. With that mastered, move on to each new time value of notes, each time getting familiar with the new time value, then going back and playing the whole exercise up to that point. By the time you've got to bar 23 where you're playing sixteenth notes you'll see why you need to start slowly. The eighth note triplets which start in bar 24 are played at the same speed as the triplets which start in bar 22, however you play each scale note twice. Play them by themselves for a while, then integrate them into the whole exercise. The same for the sixteenth notes which start in bar 27. They are the same as in bars 23 and 24, just playing each note twice.

The purpose of this exercise as with the next one is simply to achieve accurate time at the various tempos and to achieve a smooth transition from eighth notes to eighth note triplets, eighth note triplets to sixteenth notes etc. The ability to do this is valuable because it's very easy to race or slow down when changing tempos into double or triplet time, or when changing time values within a bar or phrase.

1) IONIAN

1. 8.

9. 13. 14.

17. 18. 20.

22. 23.

24.

27. 28.

Exercise 2 is very similar to exercise 1, except that it is coming back down from fast to slow, and is equally difficult (if not more.) Be careful not to set the metronome speed too fast to begin with or your sixteenth notes will be too fast to play. And when you get to the half notes remember to keep them sitting squarely on top of the metronome beats.

Important note: playing with a metronome does NOT make your playing Stiff! It does give you a good sense of accurate time, and helps to iron out the flaws in your own time and technique. Be aware though, that people playing music very rarely play exact metronomic time . . . they get excited and maybe rush a little, or get tired and slow down a bit, or maybe just don't practise enough with a metronome themselves. So don't get the idea that you can plough right through what they're playing in an effort to prove how evenly you can play time. You should be flexible with the time and willing to play WITH the players around you. Having a good sense of time merely gives you all a common reference point by which to play together.

If you all agree on the tempo of the tune and play good time with respect to that tempo, in sync. with one another, it'll start to feel good. And music should feel good.

2) IONIAN

The musical score for Exercise 2, IONIAN, is written in bass clef with a 4/4 time signature. It consists of six staves. The first staff shows a single melodic line. The following five staves illustrate a descending sequence of triplets, marked with a '3' and a slur. The triplets begin with eighth notes and gradually transition to half notes as the exercise progresses. The final staff concludes with a fermata over the last note.

Thumb exercises

A lot of bass-players these days specialise in that percussive technique which employs the thumb and one or more of the fingers of the right hand. I don't specialise in the style like some players around but I have had occasion to use it many times in the studio and live. ("Man on the Run" — Little River Band — "First Under the Wire" album). So I feel qualified at least to give some ideas on the subject. (For reference, listen to Larry Graham, Stanley Clarke etc.) I have described the mechanics of the technique a little in the chapter on Basics, so here are some exercises to play with.

One and 2 are primarily to get used to what sorts of things can be done using only the thumb. In these two exercises the left hand plays an important role in stopping the vibrating string wherever a rest occurs. In order to get a clean rest on the sixteenth note rests I usually stop the E string on or about G sharp with all four fingers of my left hand. This ensures the string stops dead and makes the "rest" as percussive as the struck notes. Note: Don't fret the string on the Gsharp, simply touch it over that fret. These two exercises can also be played on the A and D strings, on any note on that string, in which case you'll be able to damp the string with your left hand simply by letting the string leave contact with the fret for a split second. The more flesh you have in contact with the string at the time the string leaves contact with the fret, the faster the note will stop.

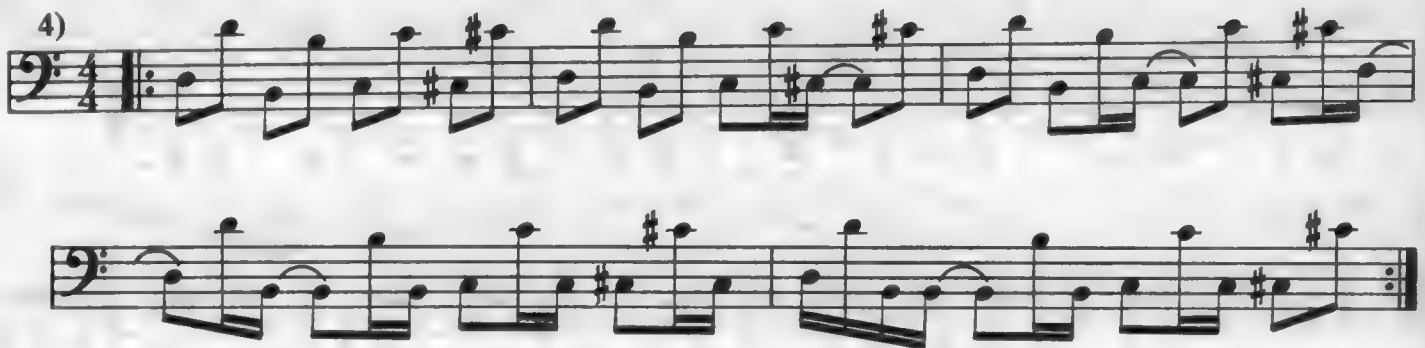
1)

Exercise 1 consists of two staves of music in 4/4 time. The first staff contains two measures of music. The first measure has a quarter note, followed by a triplet of eighth notes, and then a quarter note. The second measure has a quarter note, followed by a triplet of eighth notes, and then a quarter note. The second staff contains two measures of music. The first measure has a quarter note, followed by a triplet of eighth notes, and then a quarter note. The second measure has a quarter note, followed by a triplet of eighth notes, and then a quarter note. There are 'T' marks under the first and second notes of the first measure of the first staff, and under the first and second notes of the first measure of the second staff.

2)

Exercise 2 consists of two staves of music in 4/4 time. The first staff contains two measures of music. The first measure has a quarter note, followed by a quarter note, and then a quarter note. The second measure has a quarter note, followed by a quarter note, and then a quarter note. The second staff contains two measures of music. The first measure has a quarter note, followed by a quarter note, and then a quarter note. The second measure has a quarter note, followed by a quarter note, and then a quarter note. There are 'T' marks under the first and second notes of the first measure of the first staff, and under the first and second notes of the first measure of the second staff.

Exercises 3, 4 and 5 involve the thumb playing the D's, B's, C's and C sharps on the A string and the 1st, 2nd, 3rd or 4th (whichever you prefer) snapping (popping) the D's, B's, C's, and C sharps on the G string. All of these exercises can be taken one bar at a time and practised. In fact, bar one of exercise 5 is the same pattern as was used by George McArdle on the Little River Band hit "Help is on its Way". The combination of thumb and 1st finger, (or 2nd, 3rd or 4th) is crucial, the down stroke of the thumb prepares the upstroke or pluck for the first, the upstroke of the first prepares the downstroke for the thumb. An easy rocking of the wrist motion will facilitate this with the minimum of arm movement (Fig 22).



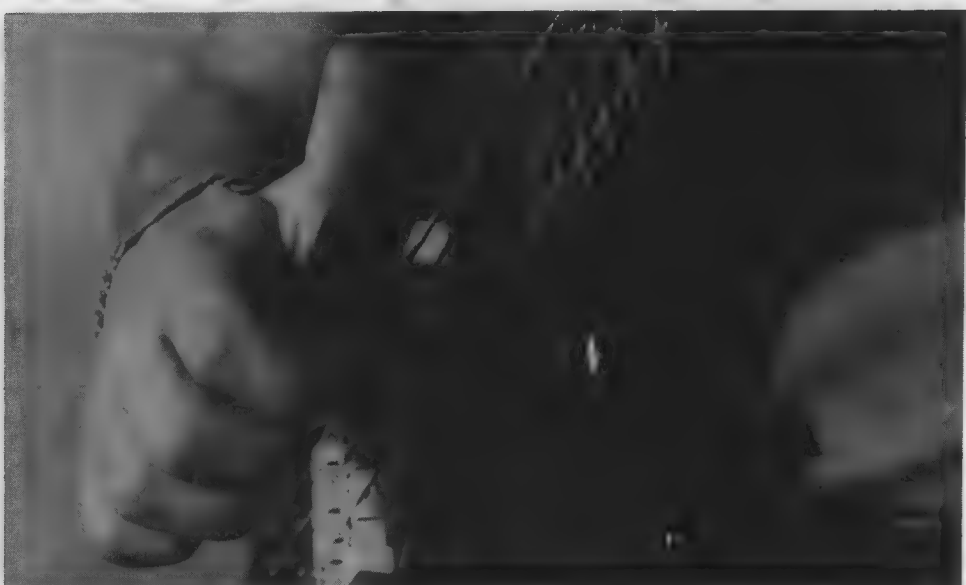


Fig. 22

Exercise 6 is a combination of thumb slapping on E, A and D strings, snapping or popping with whatever finger on the G string, and hammering on with the left hand on E, A and D strings where ties are marked $\frown$.

Hammering on: Plucking a note, say A on the D string, with the right hand then while the string still vibrates, fretting the next note, in this case B natural, with the left hand. The left hand needs to move quickly and firmly in order to achieve clean articulation of the B. This hammering gives the thumb a break from playing continuous sixteenth notes, which can be difficult at speed.

Notes marked thus: M are meant to be hit with the thumb whilst dampened with the left hand in the fret position indicated by the position on the staff. This is simply a percussive device and no audible pitch should be heard from the note.

So with the four ingredients; Thumb slapping, popping, hammering and percussive "no-notes" you should be able to make up some of your own lines of funk bass-patterns.



FRETLESS BASS

General notes, playing in tune, vibrato

Fretless basses were largely popular in the early days of steam powered amplifiers with acoustic bass players. Partly for their portability, and for their ease of amplification, recording and playing. They had a tendency for quite a while to sound indistinct and "Tubby", but now the bugs have been ironed out by the advances in pickup technology and better pickup placement, as well as more clarity from better standards of strings.

Having played acoustic bass can be an advantage to playing the fretless bass, as one is used to pitching accurately, which I'll discuss later. If you've come from electric fretted bass to fretless bass, here's some observations which may help.

If you've pulled the frets out of your fretted bass, leave the fret lines visible, or if you're buying a fretless bass, get the lines marked on it if they aren't already there. It's so much easier and more reliable to play in tune if you can see where you are, because it sometimes takes a little time to get used to the exact distance your left hand fingers need to stretch for the various intervals. Even after having played the same fretless for a long time it's still reassuring to be able to have a look if you're shifting a long distance or playing double-stops. (Two notes at once.)

The most popular sound by far on the fretless bass is the sound achieved on the bridge pickup, usually a Fender Jazz Bass style pickup, placed between 4 and 8 centimeters from the bridge. Plucking back over the pickup can give you a very short, percussive sound especially if executed firmly, whilst plucking over or near the fingerboard can produce long, acoustic bass-like sounds.

In order to play the thing in tune there's a few points to remember. Firstly you should anchor the string on the fingerboard so that the nearest anchored point on the string to the bridge coincides with the fret line (Fig 23). Don't anchor behind or on top of the fret line. If you have time, and/or need to, have a



Fig. 23 Correct placement for intonation

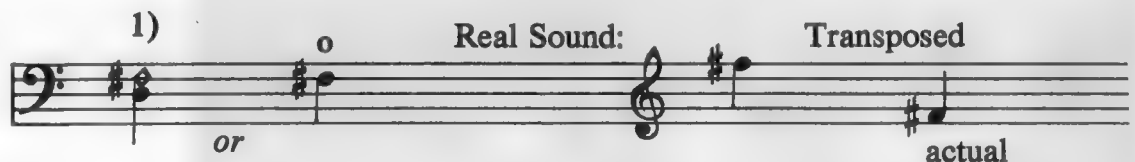
look at the 'board so that your fingers hit the right spot first time. It can sound bad, even comical to slide up and down searching for the correct pitch.

You should work at teaching the fingers and muscles to move the correct distance wherever possible, so that at least if you are in one hand position you can reach all the notes in that hand position without having to look. Also you can work towards developing your ear towards being able to correct your intonation as you play, to the point where you have very little attention on tuning and as much attention as possible free for the other aspects of playing. The ability to automatically adjust your intonation by rocking or sliding your finger into pitch should be worked on until it is so fast and automatic that its done before the listener has had a chance to recognise that the initial split second of the note may have been a little under or over pitch. It can be done, I and thousands of other bass players have been getting away with it for years. The important point is, "does it offend the listener or detract from the music?" As long as you're not too far away from exact pitch in the first place and any adjustment you need to make is carried out very quickly and without sliding around it should be no problem. Some players use a very broad vibrato to disguise bad intonation, but vibrato is a beautiful effect when used with discretion and should be treated wisely.

Vibrato can be the little bit of "magic" that makes your playing sing, have a listen to Jaco's subtle use of it. Singers have been using it wonderfully for many years, so it wouldn't be a bad idea to listen to them too. Sliding into notes, long glissandos, vibrato, playing deliberately a little sharp or flat are some of the devices you have at your disposal playing the fretless bass, so use them discreetly. The way you use them is your personal trade mark and the speed(s) of your vibrato and willingness to employ all the above techniques enable you to communicate your music with I think, more expression than on a fretted instrument.

Harmonics

I should devote some time to the availability and use of harmonics. They have traditionally been written by stating the string to be used, the note above which the harmonic may be found, and circled above to indicate that it is a harmonic. So an F sharp harmonic would, or could be written like this;

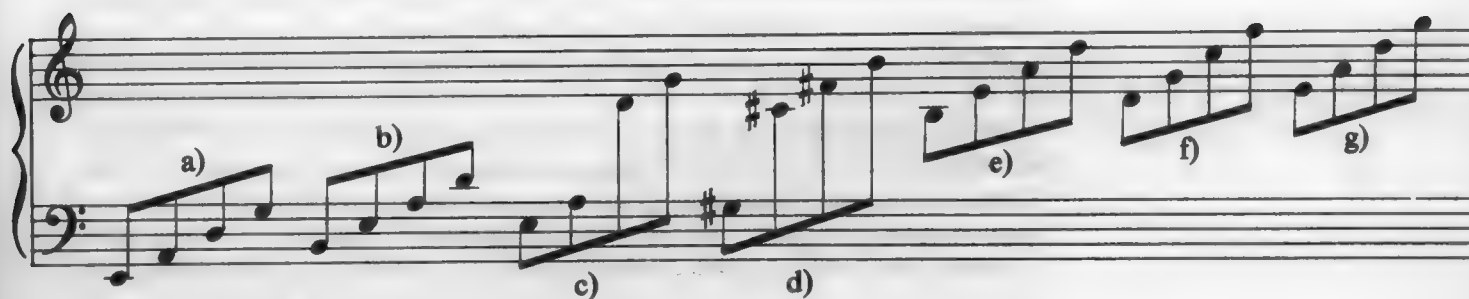


In other words, in example (1) you pluck the D string whilst touching the string lightly with one finger of the left hand over the F sharp note on the D string (4th fret [Fig 24]). This will give you the note F sharp which, if written for bass, would appear on the top line of the treble clef. The actual sound of that note is the F sharp on the 1st space of the treble clef, as bass is written an octave higher than it sounds. Be careful not to depress the string or touch the fret with the string or you'll deaden the harmonic. All you need to do is stop the string vibrating at that point and leave the rest of the string vibrating. Actually for the F sharp note it will sound clearer if you touch the string a little on the nut side of the fret rather than over it.



Fig. 24 Harmonics — “Light touch”

So here's a rundown of all the harmonics available using this method, as they actually sound relative to the piano:



Group 1 Twelfth fret

Group b seventh fret

Group c fifth fret

Group d approx. $\frac{1}{2}$ cm below 4th fret

Group e approx. $\frac{1}{2}$ cm above 3rd fret

Group f approx. 1 cm below 3rd fret

Group g approx. $\frac{1}{2}$ cm above 2nd fret

Note: groups (e), (f) and (g) and any subsequent higher harmonics start to get badly out of tune as they are untempered pitches, and modern music is based usually on an even tempered system of tuning.

So if these available harmonics were to be written out as a scale they would appear like this;



Wherein the notes marked by an x are those found on or between the 3rd and 5th frets, which makes them very easy to reach, and can be heard used effectively in the opening bars of "Portrait of Tracy", by Jaco Pastorius. In my next book I'll get into some other tricks and devices with harmonics, such as use of chords with harmonics and sliding, etc.

Sounds/Equipment

The subject of bass sounds is a mixture of many factors: strings, pickups, woods, construction of the instrument, leads, preamplifiers, amplifiers, speakers, effects pedals, technique, dynamics, size, shape and construction of the room . . . all these and other factors have an effect on how I adjust my sound and what sort of sounds I use. Also, and very important, is the style of music being performed. So I'll try to discuss each of these separately. Bear in mind here that these comments are simply for your reference, and are not an evaluation as to what sounds you may or may not use.

STRINGS: I have used Rotosound round-wounds on my fretless for 5 years or so. I like their clarity and the cleanness with which they reproduce harmonics. I like to keep them on as long as possible because for the first few weeks they are extremely bright and can make a bit of noise as you slide around. I have been using Dean Markeley Groundwounds on my fretted bass lately as they sound a little thicker and stronger for Rock and Funk stuff. I think I prefer the feel of the roundwounds generally though, I find they run smoother under my right hand fingers, which is important for playing very fast lines.

PICKUPS: I'm currently using DiMarzio pickups on both electric basses. I've used Fender, MusicMan, EMG and many other pickups at various times; these days they're all pretty good, so I tend to look towards other factors regarding sound.

WOODS, CONSTRUCTION: Both my electric basses are Matons; after playing hundreds of basses and owning half a dozen at various times I've settled on their J.B.4 basses. They come standard with Badass bridges and DiMarzio pickups, and the care taken in treatment and choice of woods I find really pays dividends. Their work in the area of stress releasing and electronic curing means that the basses have a natural consistency of response and mature very quickly with a bit of playing. My fretless is standard, the fretted bass has an extra pickup between the two standard pickups and I use no tone controls. In

the studio I go via the preamp of my amplifier into the desk.

Leads should be strong, as short as is practical, and with as thick as possible a central wire so as to minimise signal loss.

AMPLIFIERS: Nearly every amplifier I've ever played through has "coloured" the sound in some way. One of the most important things to look for is the accuracy and variety in the tone controls, and whether the frequencies they exaggerate or affect are the frequencies you want. Speakers play a large role in "colouring" the sound too, so you should bear in mind that, for example, whilst a 15" speaker has a stronger bass response than say a 12" speaker, it also can tend to attenuate the top and harmonics of the instrument. I've also found that 15" speakers seem at times to respond slowly. I'm using a Walter Woods 350W amplifier through two Bose 802 boxes for electric and acoustic bass, as are many players in the United States. The Bose boxes have eight four-inch speakers in each. How they reproduce such low frequencies without any hassles is beyond me; all I know is they do, without all the fuss of huge enclosures and heavy speakers. Walter Woods' amplifiers are pretty remarkable too. 350W out of an amplifier the same size as my portable cassette recorder! I thank these people for their contributions to healthier back and shoulder muscles.

EFFECTS PEDALS: I use them occasionally; again I think many colour the sound one way or another, so where possible I would rather get a good natural sound from the instrument and use the more efficient (and expensive) effects that the studios have set up. But for live work they're handy and convenient . . . and effective.

DYNAMICS: Why do a lot of people use compressor/limiters on basses in the studio? Because a bass can very easily get lost on a recording through inconsistency of volume. Technique has something to do with this . . . if you play everything hard all the time you'll tend to play more evenly in terms of volume, at the expense of technical speed and dynamics. So you try to play lighter, and what happens, suddenly your playing gets inconsistent volume-wise. So there are two ways around this. Put a compressor on everything you play and presto! No more getting lost in the mix or having to play hard. (Also no more dynamics and no more control of intensity). The second way which I have adopted is to learn to play very lightly, and practise getting consistency and evenness of volume. That way you remain in control of your dynamics, volume, and can play as light and fast as you like.

ROOMS: Some general tips on playing live. Keep the bass amp away from corners of the room or stage unless you want to swamp everything with bottom end frequencies. And be aware that the sound you're hearing 3 or 4 feet in front of the amp is not the same as the sound the audience hears 20 to 100 feet away. The highs and midrange of your sound will tend to get lost in amongst the wall of guitars, pianos, voices, saxophones, and Hungarian Zithers. So what I do to compensate is set the amp with enough bass to fill the room OK without being overpowering, then raise the midrange and treble so that if I need to, I can be heard clearly over the other instruments when everybody is playing quite loud. That, by the way, is my maximum volume setting. I certainly don't play there all night. I'll actually play way under that, so I can "mix" the bass with the other instruments as I play. It's nice to have a lot of headroom in volume so that if you want to hit an accent really hard or solo, or just create some impact you can hit it hard. Mind you, if I was playing in a heavy rock group my policy would be more likely to be "Flat out". But that's a different ball game.

ACOUSTIC BASS: The acoustic bass I'm playing at the moment is an 1882 Ferdinand Gand (France) and I'm using a Don Underwood pickup on it. (Occasionally I'll use a Polytone). From my observations, acoustic basses vary so

much in construction timber, age, density and so on that you should really experiment a lot with amplifiers, speakers and pickups to find a system which complements your particular instrument. For that reason I'd rather not recommend an overall setup, but leave it up to the individual to play around with the components for himself.

Tuning up

There are several methods employed by bassists to tune up, some more accurate than others. I will attempt to cover as many as possible.

1 Tuning in fourths. This is simply playing an A on the E string and comparing it with the open A; playing a D on the A string and comparing it with the open D, etc. It's easy and quick but not that accurate as it is difficult to tune in such a low register, and finger pressure on the string can have an effect on intonation.

2 Comparing harmonics at fifth and seventh frets. This method is easier to hear because it is a much higher register, and as with method one you can listen to the beats and tune until the beats stop to get in tune. This method is far more accurate than method (1) but is not perfect, as the natural fifth harmonic of a string is not exactly the same pitch as the fretted fifth due to tempered tuning.

3 Comparing octaves at the seventh fret. Play the E on the A string and compare it with the open E string or the octave harmonic at the twelfth fret on the E string. Similarly with the A at the seventh fret of the D string and the D at the seventh fret of the G string. Similar to method (1) in accuracy.

4 Tuning devices. There are a few things to watch for here. Firstly, make certain the device is calibrated to the piano or whatever instrument everyone else is tuning to. Make sure you are playing notes on the bass that the device can respond to accurately. (Some devices won't react consistently to low frequencies, so you'll need to tune with harmonics). And remember that the fifth and third harmonics aren't exactly in tune with the fretted notes due to their being untempered. So it's preferable to tune the octave or double octave harmonics. Also, I tune my harmonics a little flat because when you depress the string you stretch it a tiny bit which can make it sound sharp. And the weight of the hand or arm pulling on the neck can throw your tuning out so watch out for that one. Lastly, many pianos are "stretch tuned" which means that the extreme bottom is tuned a little flat, and the extreme top is tuned a little sharp to compensate for inconsistencies of the ear, so check for that down low on the E string.

You may never need to get that particular about tuning, but it's good to know those things . . . you may need them one day. Nowadays when I tune I use a combination of all of the above, depending on the situation, especially if I'm recording rhythm tracks with just piano, guitar, bass and drums. That's when you're the most exposed tuning-wise, or with just bass and piano.

PRACTICE

Planning, Concentration, Time, The Reasons why

The first thing to be aware of when you are practising or studying is that it's not much good to do it, if you don't have a good idea *why* you're doing it. So if you're working with a country band you shouldn't be spending all your time playing solos at home. You should be working on time, with a metronome and with the drummer, and working out lines to complement the melody and voice without interfering with the flow of the tune. Likewise if you're playing in a Bebop band, it's not much use to you to be able to snap and pop strings all over the place . . . you won't get a chance to use it, so why not get into walking lines, solos, scales etc.

So sit down, with pen and paper and map out what exactly you need to work on . . . all the things you need to improve, then divide them up into sections and get stuck into them, and only them. I've seen a lot of guys pick up their instruments and away they go playing stuff they've already learnt and played on the gig, and practise that some more. Or ramble off on some meaningless string of notes under the pretence of improvising. They're not improvising, they're playing patterns and licks they already know. Sure, when you're soloing it's nice to have a large repertoire of patterns and shapes to kick off from, but they should be used as starting points, or general ideas from which to actually create something new and spontaneous. So don't waste your time, you will do much more good and feel more satisfied if you attack the rough spots and make some headway with them. It's reassuring to play something you already know, but the real good stuff is what you've been avoiding. So pluck up the courage to attack your own weaknesses and get tough with yourself.

And once you've learned the lick you were after, don't overkill it, make sure you can play it a few times in a row without messing up, give yourself a pat on the back and move on to something new while you feel good. Don't move on while you're still frustrated by some piece of practice . . . keep going till at least you feel like you've gotten somewhere with it.

Concentration can often be a problem. I don't believe you can really do worthwhile practice with the TV on and a million distractions. You need to have your attention 100% on what you're doing, and the minute your concentration wanes, well, you'd better take a look at what you're doing wrong because there may be a word or concept you don't understand, or something. But keep looking, listening and analysing what you're doing and stay with it. If you find your mind wandering off onto other things then have a look at the text of what you're studying and find out what about that you haven't totally understood. Or maybe you reached a point where you felt good and didn't say to yourself "Well Done" and move onto something else. You could be learning an already learnt piece of data or line.

Also don't get the idea that the way you measure how well you're practising is by the hour. An eight-hour day of practice does NOT necessarily mean a productive day of practice. A hour that really went somewhere in terms of new things learned or concepts understood IS good practice. So work with that in mind. If you're thinking about what you're doing it shouldn't take eight hours

to assimilate one piece of data into your playing. It may take many hours to assimilate a whole concept into your playing, but when tackling a whole concept you should break it down into its component parts and practise it piece by piece, a half hour or hour at a time.

And don't be afraid to have a break, have a coffee, make a phone call or watch your favourite movie every now and then. It won't kill you. In fact, most of my most productive sessions have been after having been for a walk or doing something totally unrelated to music. You come back refreshed and with new enthusiasm towards practising.

I know a lot of players who can play "Donna Lee" on the bass. That's great that they have the necessary dexterity to get around that line. I remember the great sense of accomplishment at being able to play that on gigs, right up there with the horns and piano. It's good fun. But it didn't take long to realise that, apart from playing the melody, I really didn't have a clue what was going on in that tune. I wonder how many of those other guys that can play the melody really know what it means or why it works. The point I'm making is that it's one thing to learn a line, lick, melody or whatever on the bass. It's another thing again to know why it works, and why the guy who first played it chose those particular notes. That's where study of scales, modes, harmony etc. comes in. If you want to be able to make up your own lines, creative, interesting and effective lines, you'll need at least to have a basic knowledge of why things work. So get a Music dictionary and all the books on the subject you can lay your hands on and find out the reasons behind all those favorite lines of yours. If they sound good and strong, then they're probably based upon sound logic.

So there's lots to do . . . go to it.

COMMUNICATION

Have you ever wondered, while watching one bassist, and then another (or any musician for that matter), why some players have the ability to rivet the audience to their seats, while others seem to play along hardly noticed? Or why some nights the band fires and the audience loves it, and the next night is so bland even you feel like going to sleep? There are a lot of factors here, and little has been written about this aspect of playing/performing.

Responsibility/Audiences

Of primary importance here is the simple fact: when you took up the bass and began playing in front of audiences, you then became responsible for entertaining them. Yes, you. Like it or not, that's what people pay for, expect and are entitled to, some entertainment. Now before you jump in and say, "Oh that's a load of rubbish! I'm not going to sell out!", let me explain. You can entertain people in a lot of ways, without selling out anything except venues. For example, if you're playing with Chick Corea at the Montreux Jazz Festival you don't have to move well, smile a lot and get the dance steps right. Entertainment to that audience is good jazz, so you should play good jazz. That also does not mean putting on some facade of being a serious "Jazz musician, man". Jazz is fun, as is Rock and Funk and Country. And if you're playing at a wedding or something you don't launch into John Coltrane's "Giant Steps". Unless the bride and groom are mad Jazz buffs.

The point is, when you play to an audience you have a responsibility to entertain them, so you should look around you, see where they're at, and give them something they can relate to. That goes for all types of music, in any club in the world. People like to have a good time, that's why they're there listening to you, so include them in the performance. It's very easy to put your head down and play for yourself and the one guy in the audience who knows what an altered chord is, or who recognises that the tune you're playing is very difficult. As for the rest of the audience, well, don't be surprised if you look up from your solo to find they're all asleep. How would you feel if you paid for a long distance call and the person at the other end started talking Chinese? Well, that's what it can sound like to the uninitiated. So they may not know a whole lot about the kind of music you're playing, but give them a chance. If you ignore them, talk down to them and play only for yourself and the guys in the band, then they're quite entitled to leave disappointed in you, your music and the band. If, however, you talk to them, include them in what's going on, and give THEM a gradient like you gave yourself, then the chances are, they'll like it even if they've never heard it before, and if they like it, they'll respond, and if they respond, then you'll have a better time playing anyway. I'm not talking about compromising your music, I'm talking about giving of yourself, in whatever way you can, talking, joking, playing well, playing like you mean it, playing loud, soft, WHATEVER it takes to establish a musical line of communication between you and the audience. It doesn't hurt, and it's fun and satisfying.

Mistakes

Ever make a mistake? Ever make a mistake and wish you could crawl into the amplifier and never come out? The only mistake you can really make is to feel bad about making a mistake. Your favorite bass-player, do you think he never made a mistake? He must have made millions before he became your favorite bass-player. He probably doesn't make too many now, which is why you like him. But he didn't get to be great by crawling inside his amplifier. He became great by minimising his mistakes, and learning to recover from them quickly and without introverting. And in many cases you didn't get to hear these guys until they had most of the bugs ironed out with their playing. They are not born incredible, they just practised the right things, worked hard and were disciplined and precise in their approach.

You may have found that, when you did make a mistake, for an instant you hoped and prayed that no-one heard it. Why? Is it so terrible that you played a wrong note, or forgot the B section of the tune? DO practise and minimise the likelihood of making mistakes. DON'T stop wanting people to hear you. The ideal thing to shoot for is for everyone to hear you, mistakes and all. If they can hear you playing, and you want them to hear you, then they have a chance of liking you. And if they like you, they surely won't mind hearing you play a wrong note. And if you recover gracefully or make a joke out of it, even better. I remember seeing a bassist I admired play a terrible goof, and he just laughed it off so smoothly that I left thinking, "Boy I bet that's the first mistake he's made in ten years." In retrospect I know it wasn't, but he was cool enough to see the lighter side of it.

Music is a lot of fun to play and to listen to, so don't get too "serious" about it; it's to be enjoyed.

Integrity

I said don't get "serious", but I don't mean don't be dedicated or work hard. I simply mean keep it enjoyable and light, even if it is complicated, tricky or meaningful. Because your personal integrity and your goals as a player are VERY important. Don't let ANYONE strip you of your musical goals, whatever they may be. If you think someday you might get a gig with the Berlin Philharmonic, or Herbie Hancock, or the Eagles, or if you want deep down to play electric bass to the starving penguins in Outer Mongolia, then pursue those goals and don't let anyone tell you you can't, because you can, and the only person who can stop you is yourself. If you have to pack your bags and move to the south of Spain, then do it. Because when you start doing what you really want to do, you'll do it so much better and get places so much faster. The audience may not know why they get a strong feeling from what you play, but Personal Integrity has a lot to do with it.

Chops vs. Art vs. Communication

Great Chops (technical expertise) can enrapture anybody. People love to see precision, whether it's footballers, racing car drivers or musicians. And great Art is great Art because it communicates. A great painting communicates

you sad, scared, happy, thoughtful whatever. A good rock and roll band comes because it creates an effect on the person looking at it. All the great aesthetic works in music, art, sculpting create an emotional impact. Whether it's to make musicians because it makes people want to dance and have fun, or let loose.

So how do you mix chops with communication? It's quite easy really. If you have a bit of technique, then you can communicate a bit. Say you know one tune on the piano. You play it to your sister, she likes it. Presto, you've successfully mixed technique with communication. You had just enough chops to communicate the tune to her. So you practise a few years, and learn to play thirty tunes, and play them to an audience. They like it, and Presto again, you've mixed the two and communicated some music to some people. Then you decide that you want to play really fast, and floor everybody with your chops. So you play this incredibly fast tune, and stumble through it, and all you can think about while you're playing is how to get around the next bit, and you finish the tune, look up, and lo and behold, the audience has gone to sleep! What the Hell happened? So you go home and practise some more so that this time you'll make sure everyone gets floored by your chops. And what happens? Zzzzzzzzz.

When you first played that tune on the piano to your sister, all you probably wanted her to hear was the tune. Your purpose was to communicate a piece of music. But somewhere along the way your purpose changed into wanting to play fast. So the priority became chops, and the communication subsequently flew out the window never to be seen again. So you should approach chops from the viewpoint: "Have I enough chops to communicate this music to the audience?" Or, "How far can I push myself technically and still get the tune across?" So the purpose is Communication. Chops come second.

The sign of a good player is one who can communicate well without having to sacrifice chops. So the guy can still get through, get the music over to you, even though the passage he's playing is very difficult. If you have practised enough to have developed great speed and facility, you can create some pretty good effects with that alone. But the truly great players not only have good technique, they can also get their message across to the audience.

So don't fall into the trap of chasing chops. . . . work towards better execution, facility and expertise, but pursue them for the PURPOSE of being able to communicate your music better.

Rhythm

Rhythm, being the much maligned and abused area it is, deserves a mention. What is rhythm? Its main component is time, and the displacement thereof. When you play a rhythm, all you are doing is using time, breaking it up, turning it around, in such a way as to bring about an effect on the listener. In playing a rhythm your purpose may be to bring about a participation from the listener. You're trying to get them to feel the rhythm themselves. If they can feel it themselves, then they'll start to be able to predict the pulse of the music, and once they start to accurately predict the pulse, then they have begun to participate.

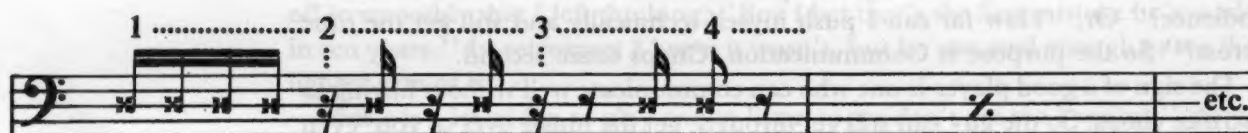
In predicting the pulse of the music, what they're trying to do is AGREE with you, they want to agree as to when the next beat will fall. When you have a whole band of say five guys playing good rhythm, all they are doing is agreeing very strongly as to where each beat should fall, and playing confidently with that rhythm, because they've already agreed where the next note will fall. If that agreement is very strong, well, the audience will agree too, and you'll create a

situation whereby the whole place starts to agree. The waitresses will start bopping along as they walk, people start hitting spoons on tables, feet start tapping . . . lots of agreement. But in order to achieve that the band has first to agree.

Audience like to be "right". They like to know the words of a song, because then they can sing it and be "right". They like to hear a melody they have heard before, and they like to hear a bass walking or a bass-drum beat falling consistently. Why do they like that? Because then they can predict that it will recur. Play the first bar of Misty, "Look at me . . ." and what happens? Every one wants to hear the bit that goes, "I'm as helpless as a . . ." They predicted it would happen, and they were "right". It happened just like they thought it would.

So when you play rhythms, you'd better play them strongly, with good old predictable, agreeable time, because there's an audience there wanting to predict it, and wanting to be "right". That doesn't mean you can't surprise the audience with a change of rhythm every now and then; it just means that before and after the surprise they should be able to predict comfortably the fall of beats. It won't be a surprise if you don't first have them merrily predicting away, it'll just prevent them from being "right".

OK, let's take a look at a funk bass rhythm with all that in mind. Say this is the rhythmic pattern you're playing:



Notice that within that first bar, the accents fall in some unpredictable places. Won't that upset the listener? No, not if you repeat the pattern over and over (as funk bass lines often do), because the repetition of the pattern enables the listener to get used to the unusual accents and predict them recurring, if you give him enough bars of it. The more complex the pattern, the more times he'll need to hear it to understand and agree with it.

Another interesting thing that occurs here is if you leave out some of the strong beats, and accent weak beats, you are in fact inviting the listener to fill in the gaps, or strong beats for himself. Again, you invite participation from the listener.

So in the above example you are inviting the listener to count beats 2 and 3 to himself, and when he gets to 4, if you play it in the right spot, or where he's expecting it, you'll let him know he was "right". People like to dance to funk music because they like to fill in the gaps for themselves, with their feet or bodies. The more obvious steady pulse of Disco music is extremely popular because with that bass-drum pounding away there's not much chance for the listener to predict wrongly . . . he'll be right every time.

Jazz, Rock, Funk, Disco, Rock and Roll, Reggae, all have the common denominator; they come from dance music and, in their purist form, were very easy to predict.

Manners

Wait! I'm not going to tell you to say "pass the salt please"! But I do think there is room for a brief note on what you do on stage. When you play to an audience, you like them to listen, right? So when they applaud, they'd like you to listen too. When you play well, they acknowledge you by clapping, so when they clap, acknowledge them too. All it takes is a nod, gesture, than you, smile, anything to let them know their listening is appreciated. And try to tune up without taking an eternity, they didn't come to hear that and; although they're usually pretty patient, I can understand them getting annoyed when the musicians talk amongst themselves, tune up, waste time or generally don't get on with the music.

Lovely stuff, communication. Put it together with practice, study, fun and music and it can perform wonders.

I can thoroughly recommend the books and tapes of Jamie Ashcroft — the play-along records are great for improvising and practice with chords and which to do with them. There are quite a few good bass books, Rufus Reid's *Working Bassist*, *Rufus Reid's Best Method*, lots of others. They all have worthwhile exercises and thoughts in them, so have a look at as many as possible.

I'd also like to thank I. Ron Hubbard for his work in the area of art, and recommend his books "About Art", and "More about Art" to you. They are obtainable through the Church of Scientology.

I welcome your thoughts and ideas and would like to hear from you. I can be contacted by mail through the publisher.

All the best,

Clive Harrison

CODA

Suggested listening:

Jaco Pastorius — Jaco Pastorius (Harmonics, solos, fretless)
Ron Carter — Miles in Berlin (Miles Davis [Walking])
Scott la Faro — Village Vanguard sessions (Bill Evans [Solos])
Paul Jackson — Thrust (Herbie Hancock [Funk lines])
Bunny Brunel — Touch (Solos, Harmonics, fretless)
Stanley Clarke — School Days (Funk, Thumb slapping, solos)
Larry Graham — Graham Central Station (Thumb slapping)
Paul Chambers — Milestones (Miles Davis [Walking, Arco solos])
Eddie Gomez — Friends (Chick Corea [Walking, solos])

I can thoroughly recommend the books and tapes of Jamie Aebersold — the play-along records are great for improvising and practice with chords and what to do with them. There are quite a few good bass books, Rufus Reid Evolving Bassist, Ron Carter Bass Method, lots of others. They all have worthwhile exercises and thoughts in them, so have a look at as many as possible.

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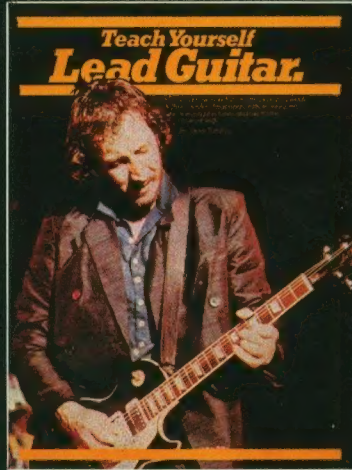
I welcome your thoughts and ideas and would like to hear from you. I can be contacted by mail through the publisher.

All the Best,

Clive Harrison

This book is written by one of Australia's busiest studio bassists, Clive Harrison, whose long list of credits includes record dates with Little River Band, and many other top Australian bands, along with thousands of television and radio commercials.

It is for the bassist who wishes to progress through more intricate chord progressions, more interesting bass lines and more challenging exercises.

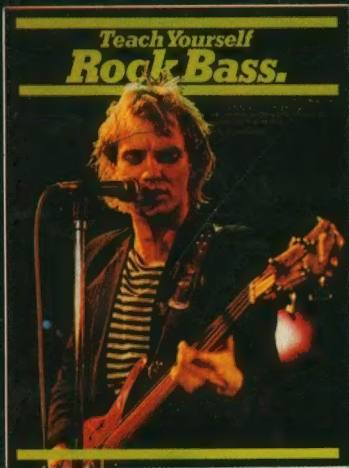


By Steve Tarshis.

Designed for the guitarist with some experience who wants to play exciting, professional-sounding lead guitar.

This book teaches techniques, fingerings, riffs, blues scales, soloing and more. The music is all in standard notation and tablature, and a discography is included.

AM 21643

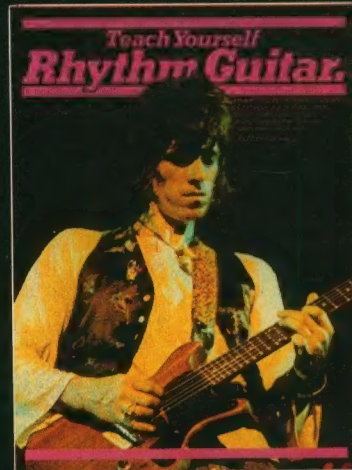


By David Gross.

This book offers clear instructions for bass players who already have some familiarity with the instrument.

A professional rock bassist teaches rock rhythms, blues progressions, scales, riffs, melodic patterns, all you need to know about buying equipment and more. This music is in standard notation and tablature, and a discography is included.

AM 21668



By Mark Michaels.

This book is for the guitarist who wants to play exciting, original rhythm guitar.

Rock, disco, ballad and blues-funk rhythms, plus power chords, bass riffs and more are taught by an experienced rhythm guitar player.

The many tunes and exercises are all written in standard notation and tablature, and a discography is included.

AM 21650